THE

NATION'S BUSINESS

April *1922*

All Business Starts with Construction and Construction Is on Its Way!

J. M. GRIES NOBLE FOSTER HOGGSON JOHN IHLDER

Is Price Cutting a Crime?

By the Former Chief Counsel, Federal Trade Commission

Railroad Goose and Truck Gander

By GERRIT FORT

Speaking for the Motor Truck

By A. J. BROSSEAU

Planning a Big Business Ahead

By SEYMOUR L. ANDREW of the A. T. & T.

Those Difficult War Debts

By JOHN ROSS DELAFIELD

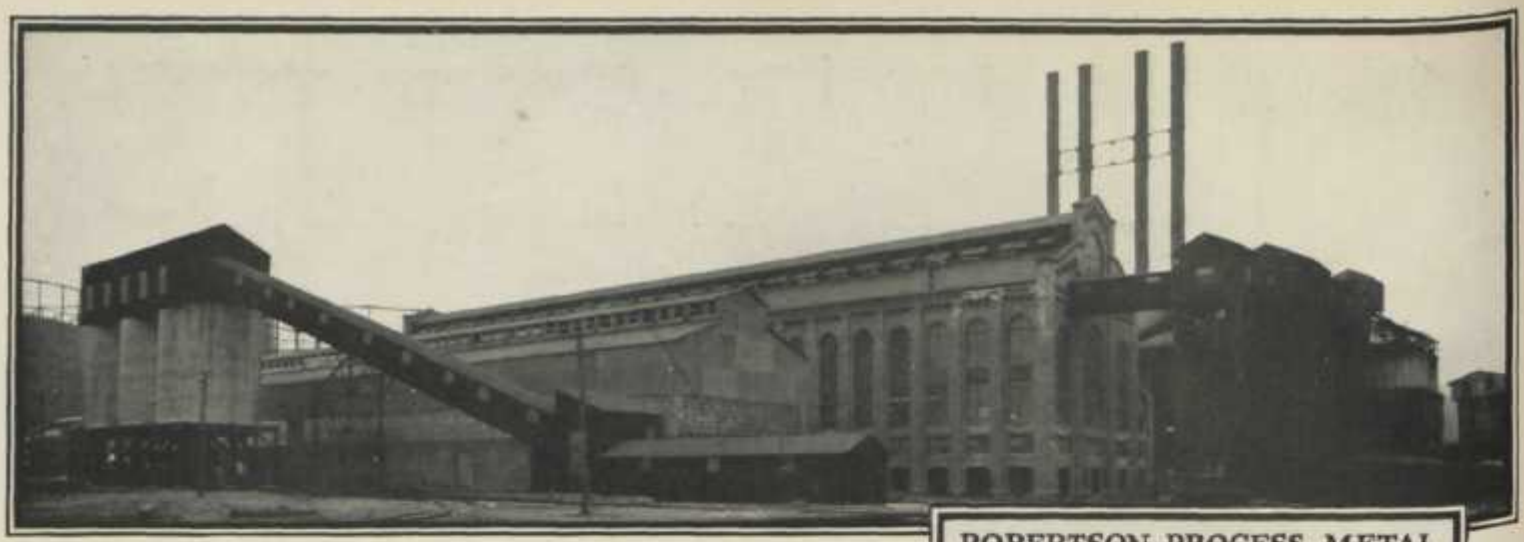
What Should We Do for the Soldier?

By ELLIOT H. GOODWIN

A Midwinter Ice Cream Boom
The Devious Path of a Pickle
Why We Can Compete Abroad



25 Cents



This Time Make Repairs Permanent

Permanent repairs mean lower overhead and greater efficiency—both vital in present keenly competitive markets—as well as freedom from worry and loss due to damaged goods and time wasted that cannot be estimated.

These savings are effected by the use of roofing that can be quickly put in place and forgotten—no maintenance and repairs for years to come—and at prices that are within easy reach even of buyers who must consider first cost before "cost per year", which is the true basis for judging economy.

Robertson Process Metal is such a roofing. It combines the strength, lightness and adaptability of corrugated steel with rust resistance, immunity to fume action and freedom from painting, repairs and general maintenance, together with excellent insulating qualities due to its steel core being in turn enveloped by coatings of (1) Asphalt, (2) Asbestos Felt and (3) Waterproofing.

THIS time make repairs permanent. The use of R. P. M. eliminates upkeep and lowers the cost per unit of production. Scores of plants in almost every industrial field have proven this to their own satisfaction—and the number is growing. May we send you samples of R. P. M. that you may test for yourself, together with literature describing its use in your field?

H. H. ROBERTSON COMPANY, Pittsburgh, Pa.

Factories: Ambridge, Pa., Waltham, Mass., Sarnia, Ont.

Branch Offices: In all principal cities in the United States. Also London, E. C., England, Edward LeBas & Co., Dock House, Billiter St.

For Canada: H. H. Robertson Co., Limited, Sarnia, Toronto, Montreal, Vancouver Winnipeg, St. John, N. B., Halifax, N. S., St. John's, N. F.



The largest operators in almost every industrial field have found profit in the use of Robertson Process Metal and have expressed their satisfaction by repeated use.

For example, the Astoria Light, Heat and Power Co., Astoria, Long Island, N. Y., (plant illustrated above) has placed 20 orders since 1909. The tower and runway shown in the upper illustration are completely covered with R. P. M.

The accompanying illustration of a section of R. P. M. shows how one impervious coating follows another in the process of protecting the metal core from all destructive influences.

To really appreciate how completely both surfaces and edges are sealed against rust and corrosion you must actually see and handle the material itself. A process sample, together with complete descriptive literature, will be gladly sent you on request.

ROBERTSON PROCESS METAL

TRADE MARK REG. U.S. PAT. OFF.

FOR PERMANENT ROOFS, SIDING AND TRIM

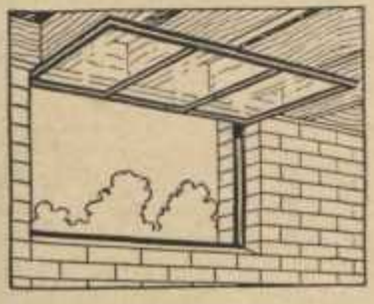
This Valuable Building Book Free to all Business Men



Every business man should keep posted upon modern building ideas. Sooner or later this knowledge will save him time and expense.

Write now for this interesting book on Truscon Standard Buildings. Whether interested in building a factory, warehouse, foundry, service garage, filling station, dining hall, shop, etc., you can use this book—sent free.

Truscon Standard Buildings cost less and are more quickly erected than any other permanent constructions. They are now at the lowest price in their history.



Built entirely of interchangeable steel panels, they can be enlarged or taken down and re-erected with 100% salvage. Daylight—Fireproof—Sturdy—Durable. Furnished in all sizes, with pitched, monitor, or sawtooth roof.

Write today, telling us about your needs, and receive this free book

TRUSCON STEEL COMPANY

Youngstown, Ohio

Warehouses and Sales Offices in Principal Cities

Truscon Steel Basement Windows

Provide over 60% more daylight than wood and cost less. Never warp nor stick, easily installed.

Use Truscon Steel Sash for any building, large or small.

TRUSCON STANDARD BUILDINGS



McGill Mfg. Co., Valparaiso, Ind., Truscon Standard Bldg., Sawtooth Type.

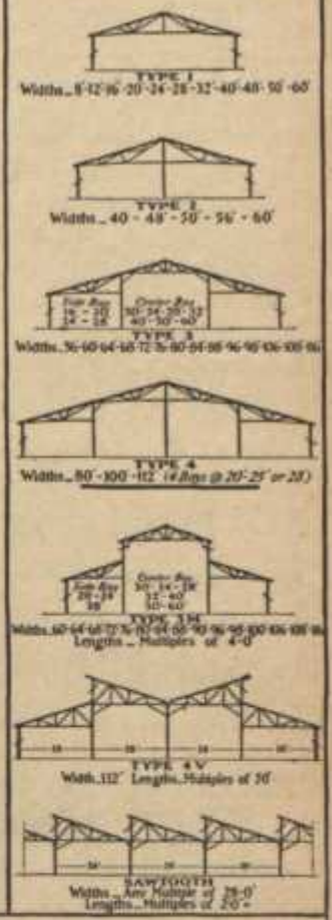
INFORMATION COUPON

Diagrams show Types and sizes of TRUSCON STANDARD BUILDINGS

HEIGHTS, Curb to Eave 8'-0" to 21'-4"

LENGTHS, Types 1,2,3 & 4 any Multiple of 10'

LANTERN, 12'-0" wide provided at Ridge of any Building 40'-0" or more in width



Truscon Steel Co., Youngstown, O.

Send Catalog and Information on Truscon Standard Buildings.

Type..... Width.....ft.

Length.....ft. Height.....ft.

To be used for.....

Name

Address

The Nation's Business is published on the 25th of every month by the Chamber of Commerce of the United States, Mills Building, Washington, D. C. Subscription price $3.00 a year; $5.00 two years; $7.50 three years; 25 cents a copy. Canadian subscription price $3.50 a year; 30 cents a copy. Foreign subscription price $4.00 a year; 35 cents a copy. Entered as second-class matter March 20, 1920, at the Post Office at Washington, D. C., under the Act of March 3, 1879.

A Purely Mutual Organization

New York Life Insurance Co.

(Incorporated under the Laws of New York)

346 Broadway, New York, N. Y.

Seventy-Seventh Annual Statement

DARWIN P. KINGSLEY, President

Balance Sheet, January 1, 1922

Securities at Market Value as furnished by Insurance Dept., State of New York

ASSETS		LIABILITIES	
Real Estate	$8,362,881.00	Policy Reserve	$787,157,463.00
Mortgage Loans	183,722,805.92	Other Policy Liabilities	28,527,025.08
Policy Loans	164,305,141.17	Premiums, Interest and Rentals prepaid	4,361,995.18
Collateral Loans	2,301,000.00	Taxes, Salaries, Rentals, Accounts, etc.	7,549,037.63
Liberty Bonds and Victory Notes	120,628,900.00	Additional Reserves	7,485,874.00
Government, State, Province, County and Municipal Bonds	155,439,933.50	Dividends payable in 1922	42,287,368.71
Railroad Bonds	271,524,487.07	Reserve for Deferred Dividends	59,303,179.00
Miscellaneous Bonds and Stocks	7,325,003.00	Reserves, special or surplus funds not included above	15,960,196.20
Cash	11,067,144.16		
Uncollected and Deferred Premiums	14,674,443.08		
Interest, and Rents due and accrued, etc.	13,280,399.90		
Total	**$952,632,138.80**	**Total**	**$952,632,138.80**

Paid to and on Account of Policy-holders during 1921	$124,308,409.00
Loaned Policy-holders during 1921 under Policy Contracts	40,871,382.00
Loaned on Farms during 1921	15,004,330.00
Loaned on Mortgages for housing purposes during 1921	9,646,991.00
Loaned on Business Property during 1921	11,358,909.00

The earning power of Ledger Assets, including Cash in Bank, advanced 0.16% during the year.

BOARD OF DIRECTORS

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50,000 Sq. Ft. for $60,000
Built in 30 Working Days

Pre-war days of factory construction have returned. Today you can buy 50,000 square feet of building like that shown above for $60,000—$1.20 per square foot—all light, usable space. *And you can move into this substantial building in 30 working days from date of order.*

This is the permanent kind of building you will have:

Excavation and Grading for standard foundations and floors. Based on normal site and conditions.

Concrete Foundations—Depth 4 feet below floors. Concrete floors 5 inches thick.

Brick Side Walls.

Rolled Steel Side Wall Sash, Truscon, Fenestra, Lupton or equal.

Concrete Window Sills.

Structural Steel Frame, 2,000 square feet clear floor space per column.

Roof Structure, structural steel trusses, yellow pine purlins and roof sheathing. Note—Trusses designed to carry 4,000 lbs. at any panel point.

Roof Waterproofing, 10-year guaranteed tar and gravel roofing or equal.



Office Building of the famous Illinois Watch Company, at Springfield, Illinois, built by The Austin Company



American Refractories Co., at Baltimore, Md. The Austin Co. designed, built and equipped this complete plant



Log Supply Co. Limited; complete plant at Berthierville, Quebec. Layout, construction and equipment by The Austin Co.

This is but one type of the buildings which Austin can deliver at equally favorable costs. Austin Engineers can give you the types of buildings that best meet the needs of your business and fully safeguard your investment.

Some Austin clients have outstripped competition and found substantial profits in a plan that called for the tearing down of old structures and the erection of new plant buildings and equipment.

Austin does more than build buildings. Engineering, building and equipment—of the kind that will promote your business is assured to you by Austin Service. Use the coupon.

THE AUSTIN COMPANY, Cleveland

Engineers and Builders

CHICAGO NEW YORK DETROIT DALLAS
PITTSBURGH LOS ANGELES PHILADELPHIA ST. LOUIS

AUSTIN

ENGINEERING
BUILDING
EQUIPMENT

WORLD-WIDE SERVICE

N.B.-April

The Austin Company, Cleveland

GENTLEMEN: We would be interested in having a copy of your circular, "Facts You Should Have Before You Start New Construction." It is understood that this request places us under no obligation. We contemplate the construction of a building, ...wide, ...long, ...stories high.

Firm

Individual

Address

Hotels Statler

A new Hotel Statler (1100 rooms, 1100 baths) is now building at Buffalo—to open in the spring of 1923; 500 more rooms will be added later.

Buffalo - Cleveland Detroit - St. Louis



The Busiest People in the Hotel

Telephone Operators — Mail Clerks — Elevator Operators

By E. M. STATLER—being one of a series of ads embodying instructions to Statler employees.

THE three busiest departments—and three of the most important—in a busy hotel, are telephone service, mail service, elevator service.

All of them have to be mighty close to 100% perfect all the time, because everybody uses them—and depends upon them.

In these hotels we do about everything humanly possible to keep those departments always at their best. At some desks we keep a written record of every transaction—which shows up every error, and who made it.

Those things—which, indeed, belong to the "back-stage" side of hotel-keeping—are mentioned here because we believe that our guests like to know that we take our responsibilities seriously, down through every last detail of service. Another aspect of it (more important to you than the routine of these departments) is the way *the people concerned* serve you. That is why we print here some of the instructions these helpers of ours have, to guide them in their contact with you.

Instructions to Statler Employees

To Telephone Operators

"Remember that a guest who is depending for service upon someone whom he can't see—someone who is, at the time, *nothing but a voice* to him—is as much influenced by the tone and character of that voice as by the words it says. See, therefore, that your voice is pleasant, always; and your manner interested and gracious.

"Push every telephone transaction to completion as rapidly as is consistent with thoroughness and courtesy.

"Be especially careful of promises made by telephone. If you say 'five minutes' be quite sure that it won't be more; if you say 'right away,' don't let anything or anybody delay or neglect it. The guest takes your word for it; see that he doesn't have to wait or complain".

To Front Office Clerks

"Mail clerks and key clerks who recognize people and remember their names are more valuable to us than others who do not.

"You know that what the guest wants (and is entitled to) is a helpful and interested, as well as a courteous, service. You are not through with any transaction until the guest is satisfied; or, if you cannot satisfy him, until you have called your superior and the matter is out of your hands".

To Elevator Operators

"Don't forget the 'please' when you're speaking to your passengers, and don't let your manner be anything but pleasant. Don't talk with other employees who are on your car; don't hum or whistle or sing, even if you have no passengers.

"At every stop where passengers are waiting, call 'Up, please' or 'Down, please'. Follow exactly your instructions about calling for floors before you start and at every stop.

"If a guest is carried past his stop, whether through his own fault or yours, say 'I'm sorry', or apologize".

To Everybody

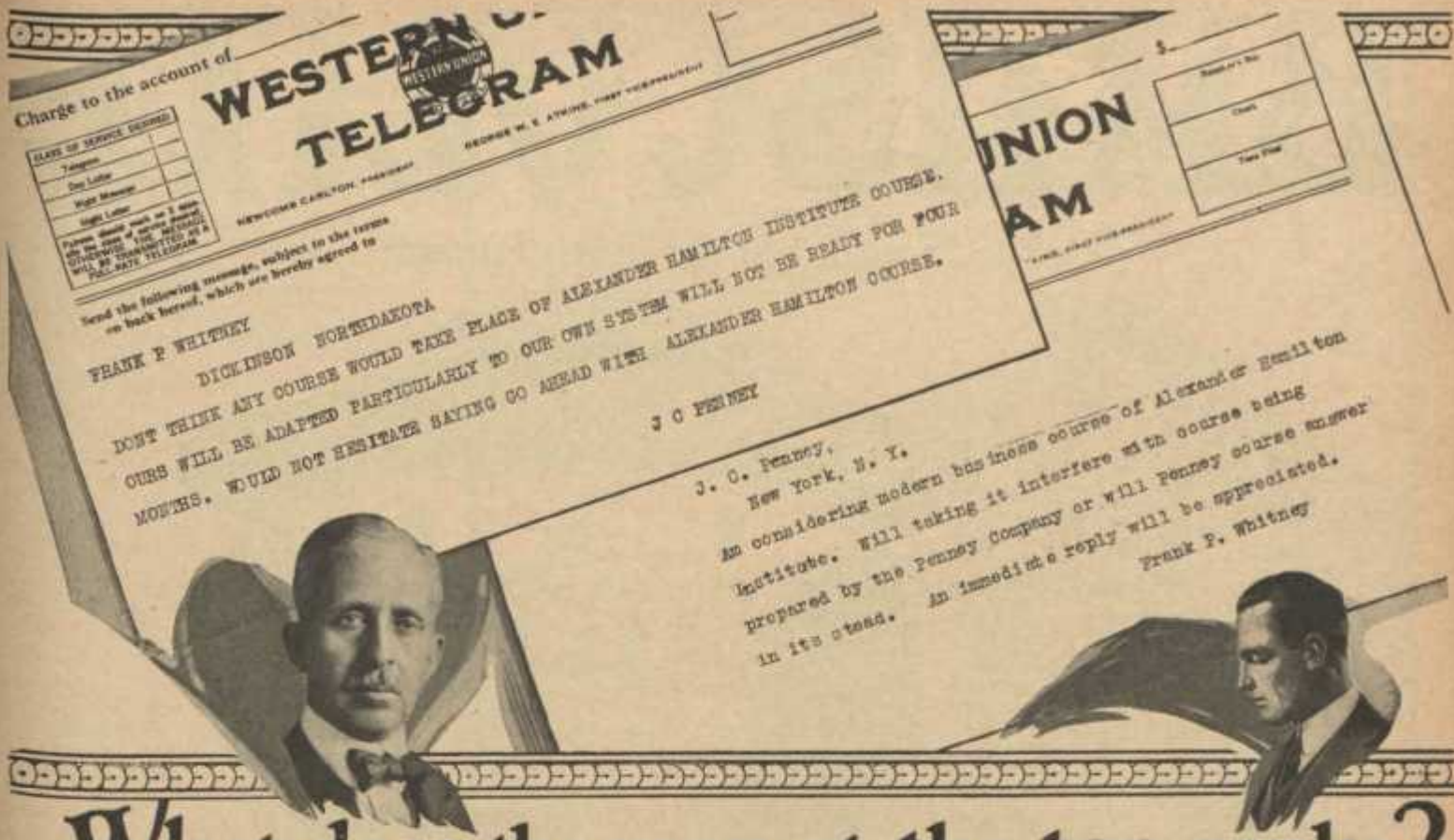
"No excuse will be accepted for any failure to carry out our policies as explained and interpreted in The Statler Service Codes.

"These hotels will not keep, and will not knowingly employ, anybody who is discourteous or abrupt or sullen—either with guests or with his fellow-employees. However trying the circumstances are, however 'unreasonable' other people may seem—or be—to you, *discourtesy cannot and will not be excused*".

E. M. Statler

Hotel Pennsylvania

Opp. Pennsylvania Terminal, New York. *The Largest Hotel in the World*



What does the man at the top reply?

SCATTERED thru the United States are the stores of the J. C. Penney Company—312 of them in 26 States. J. C. Penney, the man at the top, started business with a capital of $500 and set up his first store in Kemmerer, a small Wyoming town. Today, at forty-five years of age, he directs the whole great chain of stores from his office in New York.

So much for the author of one of the telegrams.

The manager of the Penney store in Dickinson, North Dakota, is Frank P. Whitney. He is young, but old enough to have seen men climb rapidly in business by increasing their knowledge of business. He had been investigating the Alexander Hamilton Institute Course and was just about to enrol when he received word that the Penney Company was preparing a course of business study for its own employes.

Would the two courses conflict, he asked himself. Would the new Penney Course be a sufficient substitute for the Modern Business Course and Service? He knew of only one way to answer that question and that was by going straight to headquarters.

"No Course can take its place"

To J. C. Penney, the Chairman of the Board of Directors, therefore, Mr. Whitney sent this telegram:

> "Am considering Modern Business Course of Alexander Hamilton Institute. Will taking it interfere with Course being prepared by the Penney Company or will Penney course answer in its stead? An immediate reply will be appreciated."

That same afternoon Mr. Penney's answer came back:

> "Don't think any course would take place of Alexander Hamilton Institute Course. Ours will be adapted particularly to our own system; will not be ready for four months . . . Would not hesitate saying go ahead with Alexander Hamilton Course."

The Man on the Way Up had his answer from the Man at the Top.

24,000 senior executives who have enrolled

Every day younger executives are putting to their superior officers the question that Mr. Whitney telegraphed to Mr. Penney.

"Shall I enrol with the Alexander Hamilton Institute? Is there any other training that can take its place?"

The answer that comes back almost invariably from the Man at the Top is this:

"I know that the Alexander Hamilton Institute has trained many thousands of men—24,000 of them senior executives—and that these men speak enthusiastically of the practical value of its training in their success.

"The chief need of present-day business is for trained executives, and the Institute has only one Course—a Course in executive training. No other institution duplicates this training. If your goal is a position of executive responsibility, then there is no substitute for the Modern Business Course and Service."

"Forging Ahead in Business"

All the facts regarding the Modern Business Course and Service have been condensed into a book entitled "Forging Ahead in Business." The book answers all questions that a thoughtful man is likely to raise. It is a book worth adding to any business library, and enough copies have been printed to give one to any man who is asking himself: "Where am I going to be in business ten years from now?" For your convenience in sending for your copy—entirely without obligation, of course—a coupon is attached.

Alexander Hamilton Institute
451 Astor Place, New York City

Send me "Forging Ahead in Business" which I may keep without obligation.

Name
Print here

Business Address

.....

Business Position

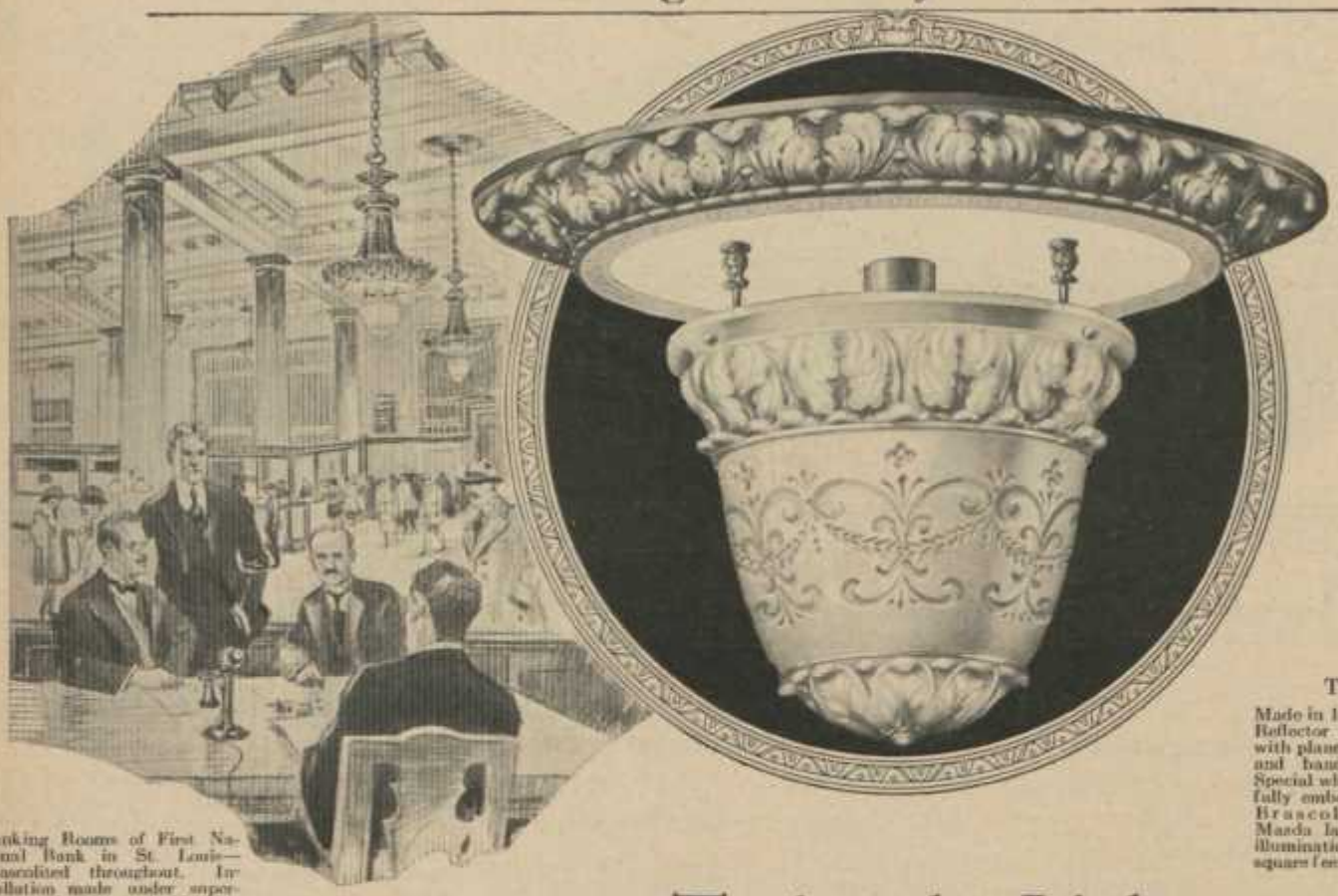
Canadian Address, C. P. R. Building, Toronto; Australian Address, 42 Hunter Street, Sydney

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BRASCOLITE

PATENTED AND TRADE MARK REGISTERED

The Ideal Light for Every Purpose



Banking Rooms of First National Bank in St. Louis—Brascolited throughout. Installation made under supervision of Messrs. Mauran, Russell and Crowell, Architects.

TYPE WG

Made in 100 to 300-watt sizes. Reflector of Grecian design with plane finished in old ivory and band in antique gold. Special white glass bowl beautifully embossed. 150-watt size Brascolite, using 150-watt Mazda lamp, provides ample illumination for an area of 200 square feet. Price $25.00.

Twice the Light
⅓ Less Current Cost

The First National Bank in St. Louis, the largest national bank west of the Mississippi, in recently enlarging and remodeling its banking quarters, installed Brascolite illumination throughout.

The old fixtures each required fourteen 60-watt bulbs, or a total of 840 watts, and delivered two foot-candles of light. The Brascolites installed, harmonizing perfectly with the architectural treatment of the interior, each uses 550 watts and delivers four foot-candles of light—twice the light with one-third less current cost.

Efficiency and quality-illumination achieved through the Brascolite principle of *diffusion plus reflection* at the source of light has made Brascolite the ideal light for every purpose—the largest selling lighting fixture in the world.

Made in a wide variety of types and styles to meet every lighting need, Brascolites have found universal popularity because of their low installation cost, low maintenance cost and high illuminating efficiency.

Write for illustrated booklets describing the Standard Brascolite line and special designs for offices, banks, stores, etc. For any special requirements our Designing and Engineering Departments are at your service, without obligation, for any special requirements.

For Stores, Offices, Banks, Hotels, Theaters, *Schools,* Churches, Libraries, Homes, *and* Public Buildings.

Better Light — — — Better Business

THE BRASCOLITE COMPANY, ST. LOUIS, U.S.A.
DIVISION OF ST. LOUIS BRASS MFG. CO.

BRANCH OFFICES (*Sales and Service*)
Atlanta Boston Chicago Cincinnati Detroit Kansas City Los Angeles Minneapolis New Orleans New York Omaha Oklahoma City Philadelphia

Canadian Distributors: Northern Electric Co., Ltd., Montreal

Through the Editor's Spectacles

TO OUR offer of a life subscription, made in facetious mood, to the reader who would sum up The NATION'S BUSINESS in a sentence, we have received a score of slogans. Whether it is the lure of the life tenure or a desire on the part of loyal friends to be of help—well, we prefer the latter explanation. Mr. C. C. Cambridge, president of the Savannah Planing Mill Co., Savannah, Ga., writes:

"Here's one I think will fit a little better: 'The NATION'S BUSINESS, a Business Necessity to the Nation's Business men.'

"Send along that life subscription!"

Dr. H. V. Tutton, of Benton Harbor, Mich., suggests:

"'The NATION'S BUSINESS—the magazine that tells it tersely.'"

And then he adds this pinch of salt to an otherwise drab and tasteless day in the office: "Short sentences are best, i.e., thirty days is better than six months."

Some of the others suggested are:

The NATION'S BUSINESS—for better business.

A reader of The NATION'S BUSINESS is a better business man.

Any way you look at it—The NATION'S BUSINESS is Your Business.

Sound business men read The NATION'S BUSINESS.

Authoritative news of organized business.

The NATION'S BUSINESS—applicable to your business.

One reader writes, rather pungently, "What's the matter with your present slogan, 'The magazine for business men?'"

The contest—for that seems to be what has developed—is still open and the life subscription hangs high. The only trouble is that each one adds a little more responsibility on our editorial shoulders to come up to a mighty high standard. If the suggestion did not come from our good friends we might be alarmed.

EDITORIALLY last month we spoke of the 294 American companies listed by the National Research Council as employing 11,000 pure scientists. Now comes Vernon Kellogg, permanent secretary of the council, with the following letter:

I notice in an editorial item in the current number of The NATION'S BUSINESS (March) under the title "Something Just as Good—and Better" which can be made a little better still. We have just issued a revised edition of our bulletin on industrial research laboratories in America and I am sending you a copy of it herewith. Instead of listing 294 as the first edition did, it lists about 550. Also there is a little more information given about each of the laboratories and the whole list is very well arranged. Have a look at it.

It only proves our thesis, "the popularly unnoticed development of industrial research." Even while we wrote a new fat edition was on the press. We acknowledge our understatement—an unusual position for an editor to be in—and submit that our deductions were just twice as valid.

IN THESE taxing times who can say just what is the test of obsolescence, promotion charges, et al? There reaches us in this mail a subscription from Dr. E. K. Adams, of Hazelton, Idaho, filled out on a blank which was printed three years ago in The NATION'S BUSINESS. The expense of that "selling effort" was written off thirty-five months ago, our graphs and charts from which we hope to capture Mr. Hoover's business cycle all wrong, and our schedule of present-day operations based on false premises! However, despite the onus placed on this factor of executive control, Dr. Adams' check was quite welcome, thank you!

BEFORE a recent meeting of the National Rivers and Harbors Congress Hon. Nathan L. Miller, governor of the sovereign State of New York, and Hon. Henry J. Allen, governor of the no-less sovereign State of Kansas, engaged in a debate on the St. Lawrence River ship canal project. One of our readers who was present, with a March number of The NATION'S BUSINESS in his pocket, tells us that the edge of the contest was taken off as far as he was concerned because he had just read a similar debate in the columns of the magazine. Governor Allen on the affirmative and Charles L. Cadle, New York State Superintendent of Public Works, presenting the opposition.

We are far too modest to repeat what our reader said about the sincerest form of flattery.

AS REMINDERS of the general interest in the Douglas Map of business conditions, we get occasional letter from cities protesting because their names are not shown. Usually these complaints take the form of a communication for a commercial organization. But not always, as witness this editorial from a San Diego newspaper. Under the head "Hurting San Diego" it says:

Persistence in processes of injustice to the business prestige of San Diego is still apparent in the trade and financial summaries and surveys by so-called "authorities" exercising their limited facilities of observation from the provincial business centers of the region east of the Mississippi.

An example of this inaccurate and clumsy method of national bookkeeping is presented in a map purporting to "show at a glance the general conditions in the country," published in

25 Cents a Copy — $3.00 a Year

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Vol. 10 THE NATION'S BUSINESS No. 4

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As the official magazine of the National Chamber, this publication carries authoritative notices and articles in regard to the activities of the Chamber. But in all other respects, the Chamber is not responsible for the contents of the article or for the opinion to which expression is given.



The New Light-Running Quiet-Running Royal

Like most really great contributions to the administration of Big Business, it has already been ushered in without the rather customary fanfare of trumpets and acclaim.

The improvements which it offers over all existing typewriters are, briefly, these: a speed as swift as thought itself; the most responsive, super-elastic key action ever devised; the noise of operation muffled down to below the point of distraction. The results: entirely new standards of typing and typewriting proficiency.

There is a revelation in store for you if you haven't yet seen it demonstrated.

Our fifty-six page book, "The Evolution of the Typewriter", beautifully illustrated in color, will be mailed free on request. Address department "N".

ROYAL TYPEWRITER COMPANY, Inc.

364-366 Broadway
New York

Branches and Agencies the World Over

"Compare the Work"

ROYAL

LIGHT-RUNNING
QUIET-RUNNING

the magazine *The Nation's Business*, issued by the Chamber of Commerce of the United States. . . . On this map the Los Angeles "area," stretching from the Mexican border to Point Conception, along a narrow strip of coast, is white. It includes the San Diego district with no indication of San Diego—Los Angeles monopolizes the entire section. The Imperial Valley region is marked in black.

Only the grossest ignorance on the part of the map-maker can account for this omission of San Diego as an independent center. . . .

We regret that we cannot plead gross ignorance as the cause for leaving San Diego off. It was, alas, the limitations of space and one color printing. When we planned this map we realized that we must keep it as free as possible from detail so that the shades indicating the difference in business activity could be easily made out. For that reason we put in the names of as few cities as possible, and these were used only as guide posts—as means of better localizing the different shadings. We took no account of which cities were independent centers and which were not. With the necessity for simplicity upon us, many important centers besides San Diego were left out, and some of them were considerably larger, too. The census of 1920 gives San Diego 74,683 inhabitants; some of the other cities not on the Douglas Map are: Newark, N. J., 414,524; Rochester, N. Y., 295,750; Akron, Ohio, 208,435; Richmond, Va., 171,667.

FROM among the many letters we have received commenting on Mr. Scott's article in the February number, "Gold Bricks in Blocs" here is one from Mr. Charles Bradley, Convent, N. J., which covers a volume in two hundred words:

I have just read your article on the farmer bloc in Congress and wish to congratulate you on its force and clarity. It is refreshing, indeed, for us in the East to know that there are men in the agricultural West with such sound economic views and the power to express them.

I am a manufacturer, using large amounts of grain—bought, of course, in the West—and like almost all manufacturers found myself in January, 1921, with stocks of raw material (grain) bought in the summer of 1920 and with contracts extending over 1921—at the highest prices, say $1.40 to $1.50 per bushel—which when the slump in business came and deflation was necessary, caused me a loss of 30 to 40 per cent.

I was compelled to write it off my books—or lose my business. I continued paying the farmer those high prices throughout 1921 and am only now getting grain at the reduced price for 1921 crop.

No one came to my relief—no "bloc" was formed to protect my interests. On the contrary my taxes were maintained with much less to pay them with. Have you read the list of industrial corporations which passed their dividends in 1921, and the immense sums charged off to bring their inventories down to true values? It is appalling! And yet no one comes forward to aid *them*.

IN the same vein an editor of a mid-west daily paper, commenting on the article, states that not only the farmer but manufacturers, bankers, distributors, retailers, have taken great losses, and proceeds to name a few of them. In conclusion he says:

The farmers were the first hit and perhaps in the aggregate the worst hit; but they were not the only ones that were hit and perhaps there is a little consolation in that fact. "Misery loves company" and when a man who has suffered reverses finds that other men engaged in lines of business that are generally regarded as entirely safe from disaster have been hurt



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as badly as he has, there is a certain degree of comfort in the discovery, for it assures him that his own disaster is not due to special lack of business sense on his part or to a conspiracy against him on the part of others. In other words, to make the direct point toward which this article is addressed, the farmers have neither themselves nor anybody else to blame for the slump in prices which has hit them so hard. The same slump hit the merchants and manufacturers, the bankers and brokers, the oil producers and mine operators, and lumbermen and railroads.

Nobody is to blame. Nobody is conspiring against anybody else. Nobody is a victim of discriminatory laws. The whole situation is as natural as it was inevitable. As a result of the World War business was deranged, world markets dislocated and world exchanges demoralized. How could America expect to sail her business barque through so troubled and tempestuous a sea and escape some sort of a shaking?

The "need of the hour," as the orator says, is for everybody to keep in a good humor, to grin if he can while he bears it, to reflect that it is all in a lifetime, to remember that we are all in the same boat and nobody must rock it or we will all get wet.

AS A SPORTING proposition we volunteered to take Henry Ford up when he offered to bet a dollar he could convince an economist that his currency scheme was sound. He made the offer while he was attending a lumbering demonstration and it was duly reprinted in the press. So we wrote:

While you were offering in Iron Mountain, Michigan, to make the bet, or within a few hours, Charles E. Mitchell, president of the National City Bank of New York, was telling the Boston Chamber of Commerce that you and Mr. Edison were "backing time-dissipated fiat money theories."

Why not undertake to convince Mr. Mitchell, who is an open-minded business man, instead of Leo Sharfman, who is a shark on economics and probably set in his notions?

I'll bet you this dollar you can't convince Mr. Mitchell.

And we offered our services in arranging, if possible, a kind of joint journalistic debate. But apparently Mr. Ford's aleatory impulses were not as strong as the press reports indicated. For our proposal was rejected thus by E. G. Liebold, his general secretary:

The dollar you enclosed is returned herewith. You will undoubtedly observe reports on the Muscle Shoals currency plan from time to time in the future.

Mr. Ford has said not only that his currency plan is feasible but that he knows "the kind of people who can put it over because of their vision along that line." Evidently he does not regard Mr. Mitchell as that kind of person.

VISCOUNT KATO is not only a nobleman; he is a philosopher. We pass along to our readers a remark attributed to him by a traveler recently returned from Japan:

"What's the matter, anyhow, with the world?" the traveler asked in the course of a conversation.

"*Too many events,*" said the Viscount.

This, we submit, is a rich distillation from Oriental thought. Isn't part of the trouble that we are bestirring ourselves too frantically for our own good, and running around in circles, and getting in one another's way, and starting things we can't finish—instead of reclining amid blossoms in the shade of a cherry tree, and waiting in patience until nature reasserts itself and the world regains its health?

M. T.



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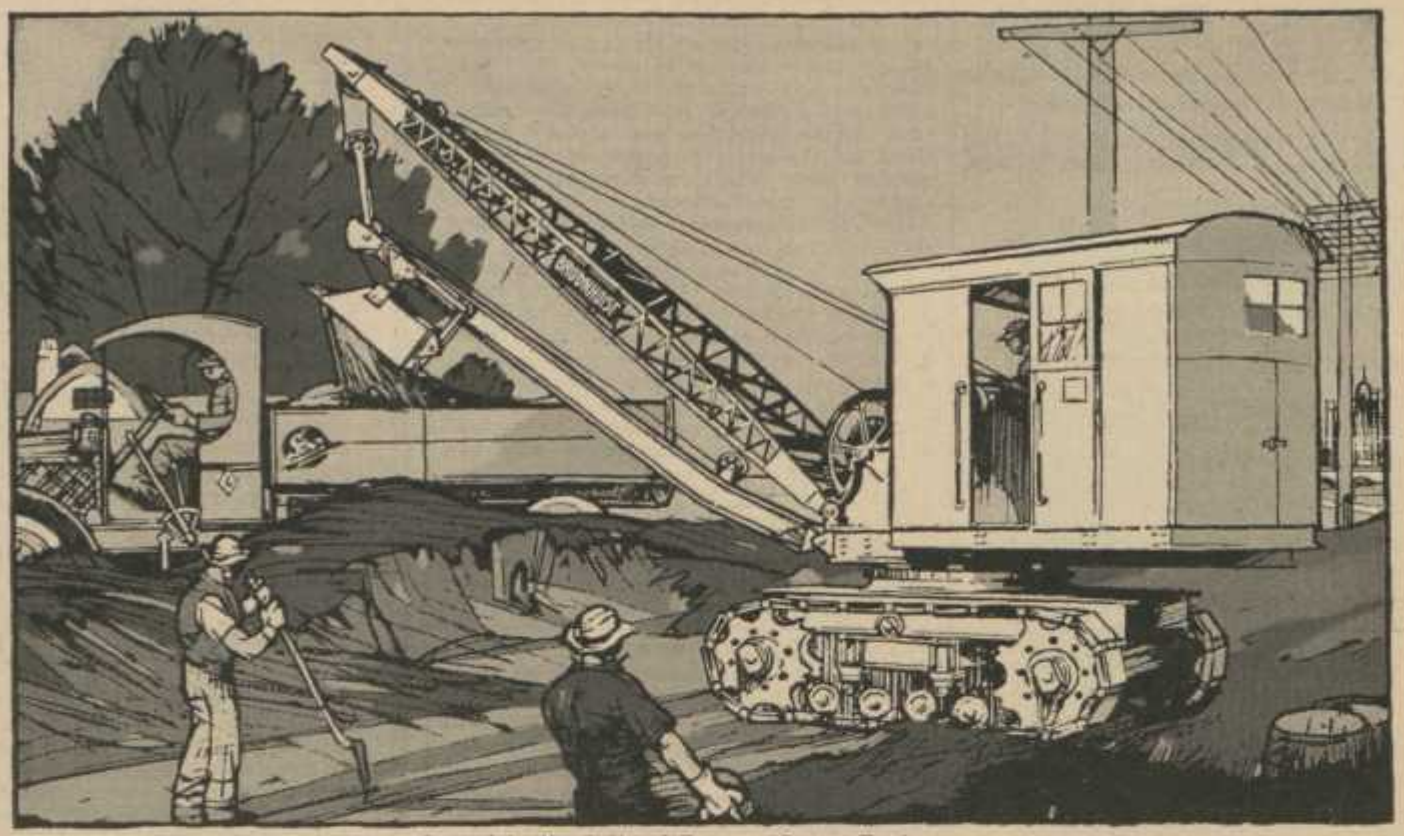
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THE NATION'S BUSINESS
A Magazine for Business Men
Commerce

VOLUME 10, NUMBER 4 APRIL, 1922

Construction Starts All Industry

By NOBLE FOSTER HOGGSON

President, Hoggson Brothers; Director, Associated General Contractors

CONSTRUCTION, America's key industry, confronts today a delayed building program involving from fifteen to twenty billions of dollars. It is the key industry because it unlocks practically all our activities and resources. It reaches into the mine, the forest, and into a multitude of factories. About one-fourth of the persons engaged in manufacturing may be said to qualify in its service, and their products go into its processes. Approximately nine-tenths of all the iron, copper and zinc and 95 per cent of all the lead produced in this country are consumed in construction. The great number of persons engaged in its activities give to agriculture and to trade support imperative to their very life. Normally it absorbs about half the country's annual accumulations of capital and at least three-fifths of the proceeds from new financing.

Renewal of construction activity is retarded by lack of public confidence, by hesitation on the part of the investor, by discriminatory freight rates, by cost of material ranging from 150 to 180 per cent above pre-war levels, and by labor costs, in many centers still at their peak. By the indictment of a few of its members, the whole industry stands indicted; and yet, until it resumes its fruitful functions, the very mainspring of this country's prosperity is broken.

Housecleaning Is In Progress

THIS is a dark picture. And yet, even as I paint it and recognize its fidelity to fact, I am nevertheless full of hope and confidence. For character is strengthened by adversity; determination and action are stimulated through necessity. Already a thorough housecleaning has been undertaken and has progressed far towards its goal of higher standards and better ethics. In this movement the leaders of the industry have the cordial support and sympathy of Secretary Herbert Hoover, and I cannot do better than quote in part at this juncture a recent message of his to the Associated General Contractors of America:

> Due to some small minority of the members of the building trades, contractors, material and labor men, the whole of this great and vital branch of American industry is under a great cloud and the moral ethics of the business are challenged daily throughout the entire country. . . .
>
> I am convinced that these things can never be cured by legislation or by jails. They can be cured by the resolute action of the vast majority of honest men who form the professions, and it has now become vital in the country's interests that this should be undertaken in the branch of which you comprise so large a part.
>
> I do not believe that there is any service that could be performed in our whole business fabric today that would be of such value as really definite action on the part of your association.

The constructors of this country fully appreciate that they are in bad odor, and they are determined to rehabilitate their profession. Many of the supply dealers and others guilty of piratical practices in the industry have taken their medicine and are now ready to start fair with a clean bill of health. I believe that they are thoroughly sincere in their desire to eliminate unfair methods and to help the industry with all their power toward respected success. Drastic steps are now being taken to cure for all time the evils which have been exposed by the Lockwood investigation in New York and the Federal Grand Jury inquiry in Chicago.

It seemed to me necessary to face at the outset the fact of the public's state of mind toward the construction industry. No honest man in that industry regrets the disclosures which have been made, however unjustly he may have suffered from them; and probably there is none who does not realize that by this painful process the industry has been healthfully purged. So long as business proceeds smoothly and correctly, little notice is taken of its methods; when its practices are incorrect or dishonest they become a matter of newspaper publicity and public scandal. If all in the construction industry have suffered alike from these recent disclosures, there is the assurance that all will profit alike from the improved conditions which will follow them.

To achieve this the general public must do its part. It must recognize, as it has not heretofore, its responsibility to business; and it should be willing to assist, by encouragement and cooperation, in building a spirit of justice and morality in the construction industry. Its indifference and inaction will but prolong the period of reformation.

The public will come to a realization of its duties in this respect if it can be brought to understand the importance of this mammoth industry to all branches of American business. It has contributed more than seventy-five billions of dollars to our national wealth. Nearly eleven million persons (either as workers or as members of a worker's family) derive their living from it. Its activities stimulate all allied manufacture and production and tend to stabilize all of them. As a radiant center of far-reaching energy it is unique. In this characteristic it is the nation's premier industry.

The investigations which revealed price-fixing combinations covering materials revealed also that wages were still at their peak in our large cities and aroused a public conviction that the prices of material were exorbitant. It should be borne in mind that for eight years construction has been subnormal. In 1917 it was brought to an absolute standstill by governmental action on the ground that it was unessential; and in the following year, when freight readjustments were made, discriminatory tariffs were imposed upon it on the theory that building materials could best bear the burden. These rates are in part responsible for the present high prices of material; but we may assume that, as the railroad problem approaches solution, this condition will be remedied.

There is the further consideration to be borne in mind that other industries, such as agriculture, mining and most lines of manufacture, have surplus goods on hand, and that there is no large domestic market unsupplied with their products. How different the situation in construction! More than a million homes are to be built—a $5,000,000,000 item in the program. The railroads are far in arrears for equipment. Office buildings and warehouses and grain elevators and banks and public buildings and highways are imperatively needed. There is not merely a demand for construction, there is a necessity for it. And inevitably this situation has affected prices. As a matter of fact, engineers, architects, builders and contractors hesitate to urge immediate activity because they are not convinced of the fairness of the present materials and labor costs.

Cutting Down Costs

LONG strides are now being taken toward a reduction in the costs of building through dimensional simplification and the standardization of material. Those subjects, I am given to understand, will be treated more fully elsewhere in this number of The NATION'S BUSINESS. Further, there is manifest a new spirit in labor. Union leaders are staunch in their support of the National Board for Jurisdictional Awards and in their opposition to those union practices which make for waste, sabotage and delay. Inefficiency is often the result of deliberate intention or of restrictions imposed by the unions without regard to moral right or wrong.

There is, too, a brand of ineffective workmanship which results from lack of training in the trade and which dissipates energy



Every stroke of this steam drill echoes in numberless factories and dwellings. The structure which is to arise from this excavation will enliven and stimulate all sorts of mining and manufacture. It will fatten the pay envelope of thousands of workers who may never see the building, aside from the hundreds actually engaged in its construction.

without achieving the results realized from skilled labor. This is due more to lack of interest or pride in performance than to any moral shortcoming. With inefficiency both unions and employers are coping. With ineffectiveness we can cope by the establishment of extension courses for ambitious workers, whereby they may develop an appreciation of their craft and elevate the standard of trade performance.

But the labor unions have not been the sole offenders against efficient production. Incapable employers, unskilled foremen, leading men or machine operators have exercised an influence equally disastrous. Constructors must realize that education and improvement, like charity, begin at home.

Further economies are assured through a national survey of construction, now being carried on by the Associated General Contractors, which has for its object the creation of a Bureau of Business Information and Statistics. Such a service will avert the necessity of consulting a large number of sources of information now separated. It will be a clearing house of facts, figures and conditions important to the industry.

Let us suppose, for instance, that a contractor wishes to bid upon a building at Dunkirk, N. Y. At present he can get prices on materials and labor from some nearby large city, such as Buffalo. He can get special prices on steel f.o.b. Pittsburgh. He can get mileage and freight rates from railway guides and by wire from connecting roads. He can obtain from the Department of Labor the costs of living for employes who must be sent to the job and maintained there. He can learn the interest rates on such loans as might be required locally with the contract as collateral. From trade publications he can obtain car loadings and reports of stock on hand at different points. From other sources he can learn the state of unemployment, the number of contracts let in that city, and the number and value of building permits recently issued. Where contracts are actually under way he can make accurate comparison between them and the other statistics on hand. Not until he had done all this, at great pains and considerable expense and loss of time, would he be equipped to make a bid equally fair to himself and to the prospective owner.

I might go at some length into other instances: The business man who desires to compare building costs in different communities with a view to establishing a factory; the manufacturer already established who wishes to map out selling territory for a construction material, and so on; but space forbids. It is enough to say that within the last year the construction industry in this country could have used such a service to advantage, to my knowledge, in connection with the marketing of a new terra cotta product manufactured in one of the middle Atlantic states; in connection with a large public improvement in Rio de Janeiro; and in connection with the cost of erecting a plant for a manufacturer who was debating several alternative locations.

The functions of this bureau will be:

a. To obtain statistical data of interest to the construction industry.

1. Information on raw materials and manufactured materials (demand and supply).

2. Character and amount of construction contemplated in every state.

3. Demand and supply for labor in the various branches of industry.

4. Financial conditions, credits and discounts.

b. To prepare and keep the original and derived data in convenient form for reference.

c. To study interrelationships of such data and discover their significance.

d. To put the data in best form for presentation to the public, and to publish a periodical covering this information in graphic and tabular form with explanatory text.

e. To act as an information bureau for the public and for the construction industry.

An international bureau of this character, with modifications in some directions and amplification in others, is a possibility of the not distant future. I believe its advantages would be manifold and out of all proportion to the expense of maintaining it.

It is easy to perceive that even a domestic bureau will tend to reduce operating costs in the construction industry. It is therefore a matter of common public interest, because every man pays his part of the tax imposed by wasteful and expensive building. The burden falls on one and all. The burden of dishonest practices in the industry fell upon the whole public, whether or not the public realized it; and I cannot refrain from returning here for a moment to this ethical question in order to set down a resolution adopted recently at the National Convention of the Associated General Contractors of America in Cleveland. Of eighteen constructive resolutions I will cite but one:

Whereas the Executive Board and the Association in convention assembled have previously declared their unqualified support of the investigation of the Lockwood Legislative Committee in New York and Daily Legislative Committee in Illinois, to the end that corrupt practices on the part of any element in the construction industry shall be exposed and corrected . . . be it resolved that the Committee on Ethics of this Association embody in the Code of Ethics a statement of principles governing the relations of constructors with owners, with other contractors, and with workmen, manufacturers and dealers; that none who adopt the stand of this association, "Skill, Integrity and Responsibility," shall engage in

the illegal practices disclosed by these legislative committees.

With this motive animating the construction industry in all its branches; with a general adoption of the quantity survey system; with a new form of standard contract now being prepared; with a new National Building Code; with standard methods of cost accounting; with adherence on the part of employers and employes alike to the decision of the National Board for Jurisdictional Awards—what may not be the future of the construction industry?

A primal need of the world today is the development of new land areas for the use and occupation of the people. Vast regions of fertile land are now barren of human life, and nearly or quite useless, which need only water and transportation facilities to become areas of productivity. Where streams are accessible, only dams and canals are required to bring water and electric power to these areas. Following such development would come immediately electric railways, homes, highways, business and industries. National liabilities would be turned to national assets, congestion in cities would be relieved, and the productiveness of the world permanently increased. And thus would the pressure of overpopulation, which has so often provoked wars, be removed as a menace to the peace and security of all peoples.

Construction Is On the Up-Grade

By JOHN IHLDER

Manager, Civic Development Department, Chamber of Commerce of the United States

A BANKER speaking before representatives of the construction industry recently said that the present recovery of building differs from previous recoveries after periods of depression. Usually the recovery begins with that kind of construction which has to do with business and industrial enterprise. This time it is beginning with that which concerns the comfort and welfare of people.

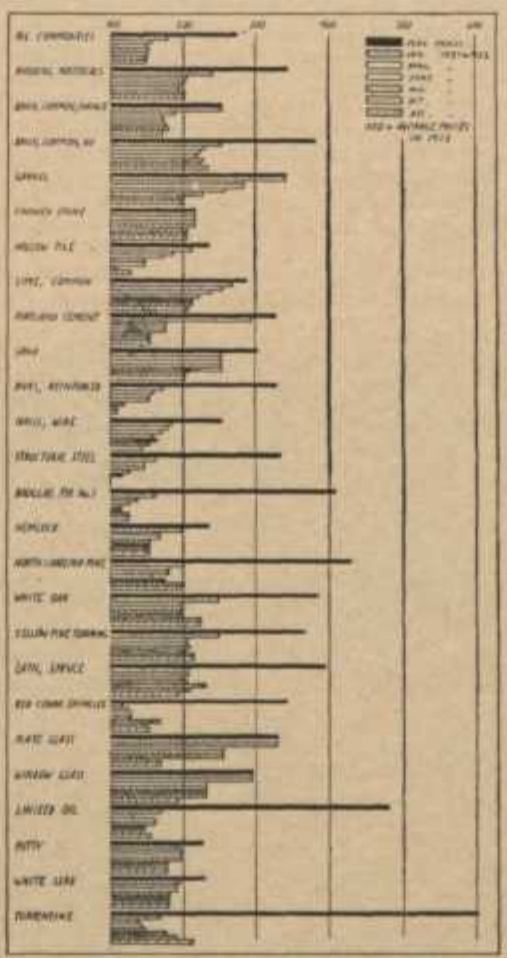
This, of course, does not mean that the recovery is less important or less significant of better times ahead quite the contrary; but that there were unusual factors in the period of depression from which we are emerging, a period during which, because of war demands, the normal balance between different kinds of building was disturbed and the greatest shortage came in those types of construction which minister to comfort and welfare. Naturally then the recovery begins with them. And as the shortage is so great, especially the shortage of dwellings, meeting it will prove a general stimulus to business. For when the new building is a dwelling, the effect is even more widespread than in the case of business or public buildings, because the equipment and furnishing of a house stimulate activity along a very great number of lines.

Reports compiled by the Civic Development Department indicate that in 1922 we shall, for the first time since America entered the war, meet and perhaps by a small margin exceed the current increase of demand for dwellings. So we shall begin to cut down the accumulated shortage, which is estimated at from a million and a quarter to a million and a half. Illustrative also is the estimated cost of building projects as compiled by the F. W. Dodge Company for twenty-seven states in the northeastern section of the country, which indicates that in dwelling construction January, 1922 ($150,722,500), exceeded both January and February last year ($147,846,200), and very considerably exceeded January, 1920 ($113,586,225).

This increase is a continuation of a movement already very noticeable in preceding months. During November and December, 1921, not only was there spent on house building more than twice the amount spent during November and December, 1920, but more was spent than in the earlier months of 1921, November actually exceeding May, and December almost equaling May and exceeding June, July or August.

Other building lagged in comparison. Public works and utilities in January, 1922, did not quite equal the 1921 figure and fell considerably behind that of 1920. Public and semi-public buildings also fell behind 1921 and 1920. Business and industrial buildings, however, showed a substantial gain in January, 1922, as compared with 1921, though falling far behind 1920.

We need to get what encouragement we can from the increased house building of November and December, 1921, and January, 1922, for though the evidence indicates that almost as much money was spent in dwelling construction during the first nine months of 1921 as during all of 1920, leaving nearly three months' clear gain—and two of those three the most productive months of the year, still the total number of dwellings erected in 1921 was below that of a normal year before the war. In other words, up to the close of last year we were still adding to our housing shortage. And so great has this shortage become—estimated at approximately three years' pre-war normal production—that even if we begin on its reduction now, it will take us 12 years working at 25 per cent above normal, to provide as adequately for our population as we did before the war. Of course there will not be a regular 25 per cent above normal house production during either 12 years or a shorter period, but such a statement enables us to visualize the situation more clearly, just as do the estimates which precede it, rough as these necessarily are because of our nationally characteristic lack of definite statistics.



This chart, prepared by S. G. Lindholm of the Civic Development Department of the National Chamber of Commerce, shows wholesale price changes as recorded by the United States Bureau of Labor Statistics. They are indicative of present conditions; of an at least temporary stabilization of building materials prices. The averages of 1913 prices are used as the basis of 100.

These conclusions are substantiated by the building permit figures, running back to 1914, from 24 cities of 100,000 population or more situated in every section of the country, and therefore taken as fairly typical. Of these cities 13 issued more building permits for dwellings in 1921 than in any one of the years 1914, 1915, or 1916. Yet the total number of permits for dwellings in all the 24 was less by 1,642 than in 1914 and by 4,982 than in 1916.

From 18 of these 24 cities it has been possible to secure figures in greater detail, showing the type of dwelling constructed, whether one-family, two-family, or multi-family (apartment and tenement houses). Here the effect of the optimistic spurt in house construction early in 1919 becomes more evident. We had persuaded ourselves that when the war ended house building would begin. And so it did. But it slowed down again under the pressure of economic conditions until in 1920 it approximated the low level of 1918. During the optimistic era, however, these cities issued permits for nearly a normal number of houses, 22,877 in 1919 as compared with 23,133 in 1914, 25,309 in 1915 and 26,654 in 1916. The proportion of multi-family houses to one-family houses, however, was not the same as in pre-war years, though more like it than has been the case since.

The one-family house was a strong favorite. Even two-family houses dropped to 570 from 2,250 in 1914, 2,149 in 1915 and 1,745 in 1916. Multi-family houses dropped in spectacular fashion, 804 in 1919 as compared with 1,413 in 1914, 1,246 in 1915 and 1,554 in 1916. While 1921 shows a slight tendency to revert to pre-war types, it still is indicative of a questioning attitude toward the multi-family house. Of the 22,145 permits issued by these 18 cities in 1921, 20,616 were for one-family houses, 1,192 for two-family houses and only 335 for multi-family houses. Another interesting fact is that the

multi-family houses made such gains as they did make in the smaller cities where they were innovations, and lost in larger cities.

The small house weathered the storm, secured capital, kept the construction industry going better than did the multi-family house.

It is, of course, impossible to make any definite prophecies as to what the next few years, or even the remainder of this year will show in the way of house building. Too many factors must be considered. The outstanding cause of increased construction is the lower cost of building. Labor is producing more than it did—this is a more important factor than the wage scale. But if the resumption of building reaches a point where there is competition for workers, their production may again fall off, costs rise in consequence, and orders again diminish. Prices of materials seem to have reached at least a temporary equilibrium, some have been nearly stationary for weeks or even months and while others are still going down, some are showing signs of mounting. The resumption of building, especially if it is gradual, may not cause a general rise, for increased production in some lines at least will reduce unit costs. If there is no general rise in materials prices the prospect for continued revival of construction is good. Money for building is becoming more plentiful and cheaper.

Here, however, are two "ifs" with the possibility of a third, for there is one factor in recent building, perhaps most marked in house construction, that has not been publicly commented upon and the significance of which probably is not generally recognized. The possibility of labor difficulties and of a temporary stiffening of materials prices are clearly in mind, but we have not discussed the real value of the house that we are getting for our money. If we begin to believe that the houses we are building and buying are so poorly constructed that money invested in them is money sunk, the effect may upset all our calculations.

It is commonplace to put a war date on poor workmanship and shoddy products. But there are two sayings in regard to the war that have in them enough of truth to warrant repetition. One is that its losses are not to be measured alone in lives or in dollars, but also in a lowering of standards. The other is that the war did not bring us new problems, but greatly accentuated those we already had.

There is no question but that the war did cause a lowering of standards that affects us in every conceivable way. Men became more accustomed to doing work that would "get by," and in the rush much of that which got by was of very poor quality. So without always being conscious of it, we gradually accepted a new and lower "norm" by which to measure. This process did not begin with the war, the war merely accelerated it. House construction has not been exempt from this process.

The Date Means a Lot

ON a preceding page there are figures based upon the assumption that a house erected in 1921 is, for the purposes of this discussion, equal to a house built in 1914. In a large proportion of cases it is not. We are hoping for a continued revival of house building and basing our hopes in large measure upon cheaper and more plentiful capital with which to finance our operations. But it is becoming more and more generally known that many of our recent buildings cannot stand as long as will pre-war buildings. The initial cost, the purchase price of houses, is coming down. But what about the real cost? For the real cost of a house is what it costs during its lifetime, minus the return received by its owner. Into this cost must be figured not only purchase price, but repairs, maintenance, depreciation. For when repairs and maintenance costs are unduly high, when depreciation is unduly rapid, the building which was regarded by its purchaser as an asset may well become a ruinous liability.

This is serious enough for the individual purchaser, but the effect will be far wider even than the total number of disillusioned purchasers. Shoddy construction is a hopeless proposition. It may be struggled against for a while, but sooner or later it breaks the spirit of its victim. A shoddy house will depreciate the value of good neighboring houses. A group of shoddy houses will blight a neighborhood. The potential home buyer of the future will look and become wary. The loaner of capital will loan a smaller percentage, draw out his money more quickly—banks in New England, long before the war, began to refuse loans on wooden three-deckers. The city not only will lose in taxable values as individual owners lose in capital values, but the community will assume an air of forlorn shabbiness which will prove a decided even if intangible handicap to its future.

Our houses today are better planned, are more attractive architecturally than those of thirty years ago, but this does not compensate for poor workmanship in building. It will be a blessing to us if the war accentuated shoddiness enough to force our recognition. Dealing with it will be no easy job, for we have in large measure lost our old ability to do good work. It is even said that the skilled workman has disappeared from the building trades; that with the best will in the world results are poor and clumsy compared with those of twenty or thirty years ago. But this is exaggeration. There are still some who can do good work.

The first step, however, is to determine that from now on our houses shall be well built, that shoddy construction shall cease. For the shoddy house is not a good investment. And unless houses are good investments we shall fail to find the capital necessary to build more than a fraction of those for which there is today a potential market. People will continue to live in cramped quarters as they are doing. The first group of business men to feel the effect will be the builders. But the effect will spread beyond them until it reaches many other lines of business, the demand for whose goods will be curtailed.

How Far Can You Standardize?

By J. M. GRIES

Chief, Division of Building and Housing, U. S. Department of Commerce

THERE was a time when the producer of materials wanted to make something different from that made by his competitor, and he attempted to supply the needs of all customers regardless of the difficulties in producing the article. It was often considered the sign of a progressive business man to make everything the public asked for. The things asked for in many cases were as unreasonable as the questions asked by a child, and the product was about as useful as the answers usually given by the parents.

A little later the construction industry seemed to have followed in the footsteps of the producers of style goods. They seemed to want to produce a design or a pattern in a way that the milliner or dressmaker makes designs. Later, however, the builder found that his line of merchandise could be called a staple in a large degree and not style goods. From that time on there has been an attempt to decrease the large number of varieties.

As long as the building industry did not recognize its component parts, as long as each group attempted to go its own sweet way, as long as the architect, engineer, contractor, building-material producer and building-material dealer failed to recognize that he was only a part of a larger industry—the construction industry—a semi-chaotic condition existed; but now, when they have begun to see more clearly that they all have many interests in common, that conditions favoring active construction favor all, and that a sound construction industry is of the highest public interest, the situation is improving.

The giant is awakened. He now knows that his arms and his legs are a part of him. He knows that no matter which member is injured, he suffers.

It is often said that there is little standardization in the building industry. By this some refer to the design of the buildings, others to the parts out of which the building is constructed, and others to building practice. It is not strange that there are many points of view, for the materials used are numerous and the product differs widely. Some would have us believe that much standardization is impossible. They tell us that the product is so varied and the artistic so dependent on variation that no attempt should be made to encourage standardization.

The product may be a one-room house, or a forty-room house; a one-family house or a one-hundred-family apartment; a business building or a factory. This may be true, but there are thousands of each of these types. Furthermore, the sizes of the rooms need not be infinite nor need the dimensions of the various items of material be infinite. Much of the material in a house is not visible and need not be considered in so far as beauty is concerned. That there should be different designs for houses all will admit, but this does not mean that no two houses should use the same dimensions or the same materials.

While buildings include many kinds of structures, I shall confine my remarks to residential, business, and industrial buildings. Here the product is not standardized, and I may say that there never should be a single type for each group. We probably never will have as few designs or models of

houses as we now have of automobiles. While we may have houses of a thousand different designs built of a thousand different materials or parts, of different quality or dimensions, standards are found everywhere.

Much has been accomplished. Some people, however, have been asleep during the last ten years. They go about claiming that no attempts have been made to simplify or standardize either products or practice in the construction industry. The great energy that the country puts into its billions of new construction each year will not be well utilized until we produce to better advantage, but I object to the statement that nothing has been done. The progress is most remarkable in some lines.

Cut stone, for example, may vary in size. While the number of sizes may well be reduced, there should not be a single size. A product like stone, which is expensive to work on the job, should be standardized as much as possible and cut at the quarry. If the sizes could be arranged in simple series and rooms or buildings designed with reference to these sizes, there could be a great saving of work on the job.

A striking example of what can be done in the way of standardization is illustrated by paving brick. Although this material is not used in the construction of houses, it illustrates the method by which reduction in sizes can be effected. The paving brick producers were making about sixty-six different sizes. At a meeting held in the Department of Commerce attended by producers, architects, engineers and others, it was decided, as told in The NATION'S BUSINESS, to eliminate all but eleven sizes.

Labor Is Hard to Figure

ONE of the serious problems of builders is that of estimating the amount of labor required to do a given piece of work. Knowing the cost per unit of material it is easy to compute the building cost from the bill of materials, but it is not so easy to compute the probable labor cost from a knowledge of the wage scale. How can a builder figure on the cost of construction without knowing what the labor cost will be?

How many hours will it take, or should it take, to lay 100 square feet of flooring? If the flooring is 2¼ inches wide, the cost will be different from what it will be if the flooring is 3¼ inches wide. The cost will differ somewhat if in one case it is laid on a subfloor and if in another case it is nailed to the joists. How long should it take to lay 100 square feet of flooring in a six-room bungalow? An office building? An apartment house? Will it take one hour? One and one-half hours? Two hours? Or how long will it take the average workman to lay 100 square feet of flooring of a specified size or kind in a specified type of building? This nearly illustrates the problem. What is the experience of the best builders? You may know your own records, but how do you know that your gauge is all that can be expected?

There are few accepted standards of work. Occasionally a builder says that the average bricklayer should lay one thousand or fifteen hundred bricks per day, but what does he mean? One man is talking about summer, another about winter. One is talking about the laying of common brick in a small house, and another is talking about laying brick in an office building.

During the last few months I have examined figures from several sources. Some say that bricklayers were laying fifteen hundred bricks daily in 1913 and that they were laying seven hundred and fifty bricks in 1920. These figures would be of great value if dependence could be placed on them. An examination usually shows that most comparisons are untrustworthy. Immediately following the war, many did bricklaying work who had never had any previous experience. Whenever the employer compared men of about equal skill the variation was much less than when he compared the skilled workman with the novice.

In attempting to make a comparison, numerous differences were found which made it next to impossible to arrive at any reasonable conclusion. Some of the differences found were:

1. One job was done in the summer, another in the winter;
2. One job was done with highly skilled labor, the other with novices;
3. One was an office building, another a small house;
4. One was a factory building and the other a schoolhouse;
5. One was an 8-inch wall and another a 16-inch wall;
6. One was face brick and another an interior wall;
7. One was a 16-inch foundation wall for a factory, another a 12-inch factory wall without pilasters, another an 8-inch wall, pilasters and cornices.

Some contractors have made time studies and know approximately the number of brick a good workman should lay in eight hours for different types of wall and under different conditions, but the great majority operate on guesses only.

Standards of work should be determined for many different operations. We should know more about the laying of hollow tile, the work of the tile setter, the time required for performing certain units in framing, roofing and siding.

We cannot establish standards for work as long as the builder fails to schedule his work. One of the first essentials is to have materials on hand. If the management fails to order the work properly, if it makes the carpenter wait for the framing, if it makes him walk 100 feet to get the studding, you can neither expect results nor establish standards in which both an employer and employee will have confidence.

With the closer cooperation of every element in the construction industry we will soon speak the same language. We must accept a common terminology. Furthermore, cost accounting must be more uniform than it is today. What two producers, what two vendors, or what two contractors have the same definitions for ledger accounts? Many will say that all agree. You think the other fellow uses your terms, and he in turn thinks that you use his. I have examined many sets of books and found, even among those who claim to have the same system, that the definitions of accounts differ.

When contractors compare costs with each other, I become skeptical. Why? Because I have often found that the definitions of labor accounts vary widely; that contractors are talking about entirely different things. The account may bear the same name, but the expenditures charged to the account are not the same. I have seen trucks charged to a single job or to the month's expenses, while others have charged it to equipment. Some make an annual depreciation charge, and others never charge the expense to operation.

The material dealers usually have an account called delivery, drayage or trucking. But what does it means? In some cases it means only the labor; in others it means the labor, horse feed or gasoline; in others it includes depreciation; in others only the actual time the equipment is employed, while others take the total annual expense of maintaining the equipment and apportion it against the performance.

Why should not contract forms be more nearly standardized? If good contract forms are adopted, much less time need be devoted to the study of the contracts. Litigation will be less common. There will be less misunderstanding and a better spirit will exist among the groups composing the construction industry. The contractors, architects and others are now trying to formulate something approaching the standard form of contract, and there is little doubt but that good results will come from this effort.

The construction industry is making great progress. One of the greatest advancements made recently is the recognition of the fact that it is one of the great industries and that the individual parts or groups realize that they are a part of that industry and that cooperation is necessary to ensure progress and obtain the benefits of economies made possible only through cooperation.



Beware of This Trade Trap!

AGENCY agreements with foreign concerns are things to view with caution, according to the Bureau of Foreign and Domestic Commerce. Any agency agreement that would tie up the American exporter in a certain territory should be given the most rigid scrutiny, to see that the American company is not delivered into the hands of a concern that can in effect exclude its goods from the territory while it pushes the wares of a foreign competitor. Flagrant cases of this sort of thing, the bureau says, have come to its attention.

Industry's Own Arbitrators

By SILAS BENT

IF AN ELEVATOR is being installed, should the annunciators be wired by electricians or by the elevator constructors?

If asbestos plaster is put into the boiler-room, shall asbestos workers or plasterers attend to it?

If scaffolds must be erected on a building job, shall carpenters do the work, or hod carriers, or other day laborers?

Who shall do acetylene and electric welding? Electrical workers, or sheet metal workers, or iron workers, or plumbers and steamfitters, or machinists?

Shall rods and other material for use in reinforced concrete be unloaded and handled by hod carriers, or by unskilled day laborers, or by structural iron workers?

Shall sheet metal window frames and sash be set and hung by carpenters or by metal workers?

QUESTIONS such as these cause nearly three-fourths of the strikes in the building industry. They are no questions which involve the relation of the employer to the employe. They do not hinge on wage schedules. They are bickerings between different unions; and they have been the cause of costly delays in construction work in the United States for the last quarter of a century. In such cases the owner, the architect, the engineer and the contractor are innocent bystanders during a kind of family quarrel, and the innocent bystanders get most of the brickbats. Such delays, lasting from three days to nine months, touch the workers' pocketbook, to be sure; but they hit hard the pocketbooks of men who have no part in them and until two years ago have had no voice in trying to decide them.

For more than fifteen years, for instance, there has been a bitter quarrel between sheet metal workers and carpenters in regard to the hanging and setting of metal doors and windows; and today construction work all over the country is being delayed because the carpenters will not accede to a decision in favor of the metal workers. As a consequence the Building Trades Department of the American Federation of Labor has suspended from membership the United Brotherhood of Carpenters and Joiners, numerically the strongest union in the organization.

And as a further consequence the Federation is actually standing back of contractors, notably in Cleveland, who have employed non-union carpenters to carry forward their work.

This singular situation arises from the fact that the carpenters' union was one of seventeen international organizations in the Building Trades Department of the Federation which subscribed to the rulings of the National Board for Jurisdictional Awards; and it is the only one of the seventeen which has so far refused to abide by the decisions of the agency it helped to create. Contractors, engineers and architects collaborated in the work.

The United Brotherhood of Carpenters and Joiners, 350,000 strong, is the greatest organization of skilled workers in the world. That union bricklayers and iron workers should be working amicably alongside non-union carpenters in Buffalo and Chicago and Cleveland approaches the incredible, from the union standpoint, and yet it is so. John H. Donlin, president of the Building Trades Department of the Federation, explains the situation when he says succinctly:

"The National Board for Jurisdictional Awards is regarded in union labor circles as the creature of this department. We conceived it, we are pledged to its success, the carpenters along with us. For the common good we must see that its rulings are upheld."

It must be said in this connection that the carpenters' is a contentious union. As I look over the disputes decided by the national board I find that eleven at least have been between the carpenters and other unions. Let us, as a matter of curiosity, enumerate them:

The carpenters have disputed the rights of the bricklayers, masons and plasterers; of the electrical workers; of the bridge and structural iron workers; of the hod carriers, building and common laborers; of the lathers, wood, wire and metal workers; of the amalgamated sheet metal workers; of the painters, decorators and paperhangers; of the plasterers, operative and cement finishers; of the plumbers and steamfitters; of the roofers, damp and waterproof workers; and of the slate and tile workers.

This is a part record of their quarrels. More than this, the formation of a national board of awards was supported in a labor meeting by William L. Hutcheson, president of the union, and he himself, as a member of the board, helped to decide many disputes involving other unions, not to speak of some involving his own, most of which were decided in his favor. It was not until the metal sash and window case that he withdrew.

Frank Duffy, secretary of the carpenters, strongly supported the movement for a national board. The board is, in fact, as much the creature of the carpenters as of anybody else; and it is the carpenters who have been the first to revolt against it. This is but another example of labor's inhumanity to labor. And the Federation has undertaken to meet it by outlawing the carpenters' union.

During the last year the board settled or averted two hundred strikes. In the two years of its existence it has decided forty jurisdictional disputes and has settled them to the satisfaction of all involved until the carpenters kicked over the traces.

The board is a Supreme Court in dispute between labor unions as to their precedence and privileges in doing certain classes of work. Its first session was held in March, 1920. It is not a government organization but a voluntary agency, representing the contractors and the workers, as well as the engineers and architects, who in a sense stand between the employers and the unions.

So quietly and effectively has this board done its remarkable work that little has been known of it outside the construction industry. And yet it is responsible for enormous savings alike to union labor, contractors and to those who put their capital into construction. At one time in St. Louis, prior to the formation of the board, so much trouble came up during the erection of two large buildings that the men who financed them asserted that they would never again invest their money in construction, but would find other uses for it; and in Chicago, work was stopped for more than nine months on a big enterprise because of a quarrel between union workmen as to how the work should be done.

> "NO FACTOR in the troubled industrial field today gives greater promise of peace and justice than the National Board for Jurisdictional Awards.
>
> "The decisions and agreements of this Board are vital to the progress and full development of construction and its allied industries. In functioning for two years it has done splendid work in averting many strikes which would have brought idleness and heavy loss in production. Thus a saving has been effected to the public of many millions of dollars. All Americans should give their full support and intelligent cooperation to the beneficent activities of the Board."—*Arthur S. Bent, President of the Associated General Contractors of America.*

Its Formation Due to Unions

IN reality the formation of the board was due to the labor unions themselves. They found they could seldom settle their disputes amicably and the Building Trades Department of the Federation called in John B. Lennon from the Department of Labor to tell them what to do about the unions. It was partly owing to his advice that representatives of the architects, engineers and contractors got around a table with representatives of labor, to find some peaceful way of reaching by conference and arbitration a mode of industrial peace in building.

It is not necessary to detail the preliminary meetings in Cleveland, Indianapolis, Nashville, and Chicago, through which the national board was brought into being. As now constituted it has eight members, three representing the unions, three the contractors, one the architects, and one the engineers; and six must agree before a decision becomes binding on all the interests concerned. At present the membership is as follows:

E. J. Russell, of St. Louis, Chairman, American Institute of Architects; R. P. Miller, of the New York Engineering Council; Col. John R. Wiggins, of Philadelphia, and F. J. C. Dresser, of Cleveland, both of the Associated General Contractors of America; C. C. Pierson, of Indianapolis, the Building Trades Employers' Association; John J. Hynes, John Coefield, Thomas R. Preece, of the Building Trades Department of the American Federation of Labor; and William J. Spencer, executive secretary.

The board has decided, for instance (reverting to those questions propounded at the outset of this narrative), that in the dispute between the International Brotherhood of Electrical Workers and the Elevator Con-

structors' International Union, the electric work on flashlights, annunciators, lamps and feed wires to the controllers should be done by the electrical workers. Other electrical work was awarded to the constructors.

The board decided in the dispute between the Operative Plasterers and Cement Finishers' International Association and the International Association of Heat and Frost Insulators and Asbestos Workers, that the finishing work on ceilings with asbestos and other finishing material (where the ground work has been done by the asbestos worker) shall be done by the asbestos union.

In the dispute between the International Hod Carriers, Building and Common Laborers' Union, United Brotherhood of Carpenters and Joiners, Operative Plasterers' and Cement Finishers' International Association, and Bricklayers', Masons' and Plasterers' International Union, the board decided that the erection and removal of all scaffolds, including trestles and horses used primarily by lathers, plasterers, bricklayers and masons, should be done by mechanics and laborers in these trades as directed by the employer. But it was decided that scaffolds more than 14 feet high should be built by the carpenters, and that the making of other than temporary horses and trestles was a matter for the carpenter.

Then there was the dispute between electrical workers, sheet metal workers, iron workers, plumbers and steam fitters, and machinists, about acetylene and electric welding. The board judiciously determined that each of these trades should have jurisdiction over the welding when the work was necessary in its respective work.

And in the matter of unloading rods and other material for reinforced concrete, a subject of dispute between the hod carriers and the structural iron workers, the board determined that the work should be done under the supervision of such a person as the employer might designate.

To all these and nearly two-score other decisions the unions bowed in acquiescence. It was not until the carpenters took umbrage about the placing of metal doors and windows that there was open revolt against a decision. The carpenters had been setting windows and hanging doors since a time when the memory of man runneth not to the contrary, and the advent of the fireproof skyscraper found them unprepared to surrender to other workers this special function, which they had come to regard as their very own. They resented the insistence of metal workers that, since the new-style doors and windows were of hollow metal, carpenters were not the men to attend to them. And when the board decided that, in case the trim was of No. 10 gauge or lighter, the metal workers should have charge of it, the carpenters balked.

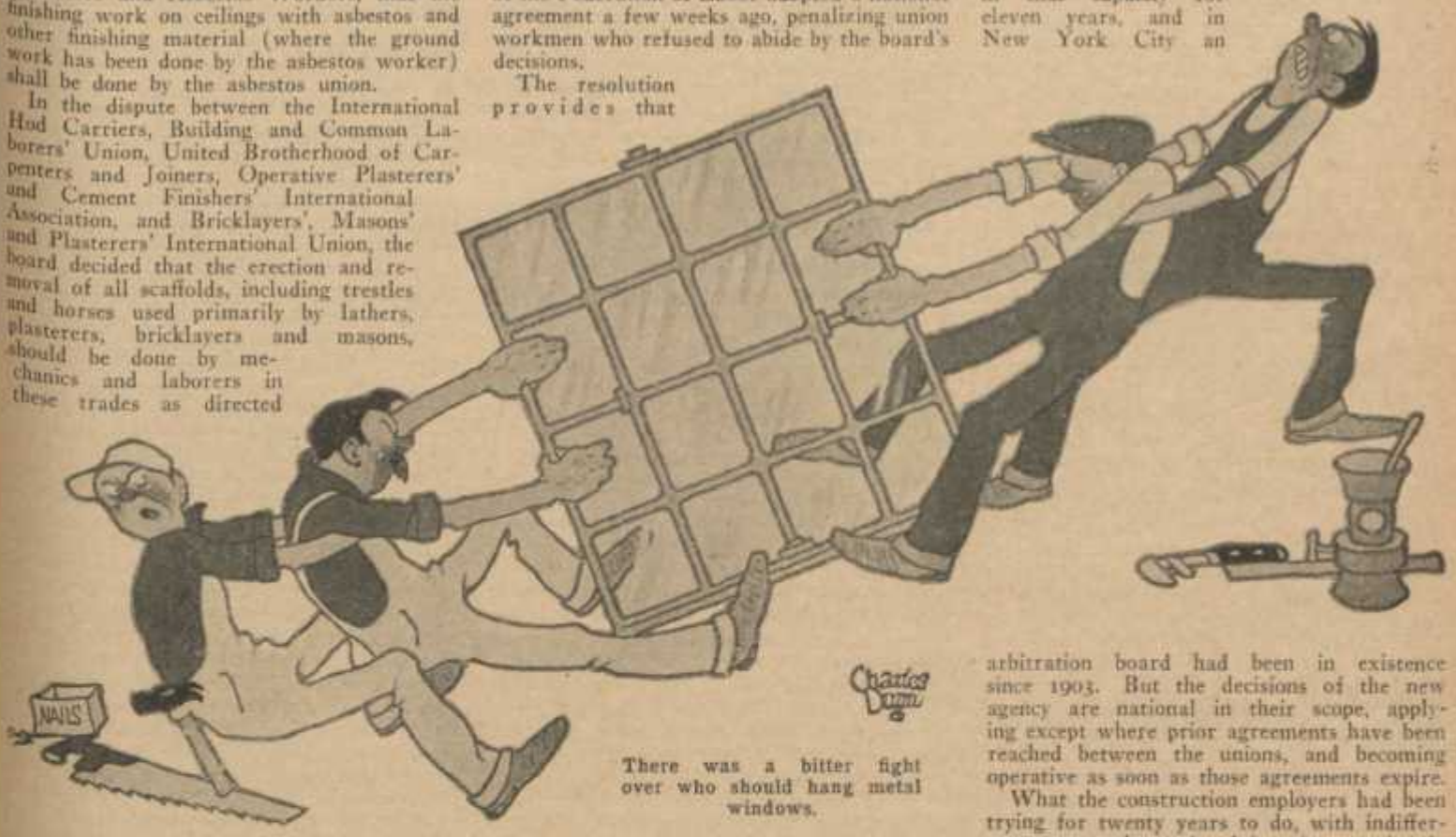
This, in spite of the fact that in another jurisdictional dispute the board decided in favor of the carpenters as against the metal workers!

As a result of this attitude, architects, general contractors, engineers, trade employers and the Building Trades Department of the Federation of Labor adopted a national agreement a few weeks ago, penalizing union workmen who refused to abide by the board's decisions.

The resolution provides that local building trade councils of union labor shall suspend unions and refuse to recognize or support them when they refuse to abide by decisions of the national board; it also provides that general contractors and sub-contractors who employ only union labor shall incorporate in their agreements with labor a provision for compliance with all the decisions of the board; that they shall refuse employment to members of local unions which do not abide by such decisions; that architects and engineers shall insert in all their specifications and contracts a clause that such decisions shall be followed.

It will be clear that the decisions of the board apply only to disputes between organized workers. They do not directly affect open shop construction. And yet the decisions as to the kind of men who are to do certain work must inevitably bring a more highly skilled type to the installation of each kind of material in building; and so, aside from the large savings to labor and to the industry, the board is contributing as a by-product a more competent personnel, with the promise of greater rapidity and greater skill as time goes on.

In some parts of the country, even before the national board was formed attempts had been made to meet the constant trouble arising from inter-union quarrels. In Chicago a Joint Conference Board acted in that capacity for eleven years, and in New York City an arbitration board had been in existence since 1903. But the decisions of the new agency are national in their scope, applying except where prior agreements have been reached between the unions, and becoming operative as soon as those agreements expire.



There was a bitter fight over who should hang metal windows.

What the construction employers had been trying for twenty years to do, with indifferent success, the national board succeeded in doing from the outset of its existence. In consequence, a movement is now afoot to extend the principle to other problems of industrial relations by organizing a National Joint Conference Board for the construction industry.

Judge Kenesaw Mountain Landis, in a district dispute in Chicago, upheld the work of the National Board for Jurisdictional Awards and told all the building trades unions that they must support it. This was but part of a dispute which also involved wages, and in which, so many observers said, the unions got a black eye; but the unions had proposed Judge Landis as arbitrator, and—with the exception of the carpenters—they loyally upheld his decision. A large committee of Chicago business men has now been formed to see that the Landis award is carried out, but it should not be confused with the decisions of the national board, with which it has only a casual connection.

The Devious Path of a Pickle

DEAR MR. EDITOR: Will you please tell Elizabeth why she must pay a quarter for eight small pickles? Elizabeth is my wife, and she stumped me at the dinner table last evening with that question. I am a retail dealer, and I can answer questions, at least to my own satisfaction, about the prices of the goods I sell; but I couldn't convince Elizabeth that the delicatessen or somebody along the line wasn't profiteering on those —— pickles. If you will help me out it will reestablish my prestige in the household.—J. M. O'C.

THIS letter looked at first like an inquiry into domestic economy, and therefore outside the province of The NATION'S BUSINESS; but on closer examination it was revealed as really a matter of domestic distribution, which is distinctly the concern of business in its national aspect. So here is an attempt to comply with the request.

On the label of Elizabeth's twenty-five-cent bottle of pickles it is stated that there is to be found within vegetables (cucumbers) spices, sugar and vinegar. The count of cucumbers is eight, and the size of none is greater than your thumb. There is one minute red pepper, a quantity of cinnamon bark and the savor perhaps of other spices in solution.

But that wasn't all Elizabeth (since she must remain incognito) got for her money. Obviously she bought the bottle, and the lithographed labels, one on the face of it and one around its fat neck. And she bought an ingenious metal top, lined with cork.

From interior evidence in her note it does not appear whether Elizabeth purchased the bottle and carried it home, but for the quarter she paid she could have had it delivered; so she bought that service, too. And she paid the clerk who waited on her, and she helped pay the rent of the store where she traded.

But is that all? No, for on inquiry I find that she bought a corrugated-paper wrapper for the bottle, and one twenty-fourth of the wooden box in which the pickles were transported to the delicatessen. Transportation? Then she must have bought some transportation. This widens the horizon. For there was the transportation of pungent spices from Madagascar, or Ceylon, or Java, or China; there was the transportation of cork from Africa and of metal from mine to smelter; there was the transportation of sugar from South America, or Cuba, or Louisiana; there was the transportation of apples to a cider press and the transportation of cucumbers from the truck farm to a market. And there was the transportation of all these things to the pickle factory, the movement of pickles to the wholesaler, and then to the jobber, and then to the delicatessen.

By ocean-going steamer, by truck and rail, and perhaps by express and parcel post, the materials were assembled and moved to the shelf of that little delicatessen where Elizabeth bought her eight dwarf cucumbers. And the process covered a long period of time, awaiting her imperial pleasure as purchaser. There was what may be called a kind of transportation from the time these things were taken from the earth to the time the pickles were put into Elizabeth's mouth. In part this kind of transportation is called interest on capital, and in part it is called rent of the buildings in which the raw materials and the semi-finished and the finished materials were housed pending a demand.

Part of the time the pickles were in refrigerators, and part of the time they were in heated buildings, and so Elizabeth was paying for fuel, and ice, and light. She paid her share of the storage charges, and she paid for the rent of tools used by laborers in making the box, and the wrapper, and the metal cap for her; and she helped pay for the credit extended to the producer or the manufacturer, or the wholesaler, or the retailer, or some of them or all of them. She paid for expert selection of the ingredients and a technical knowledge of how to make a condiment to tempt her palate. And she paid for the convenience of having the particular kind of sweet pickles in a small package where and when she wanted them.

Don't Forget the Advertising

PERHAPS she asked for that particular kind because she had seen it advertised, and so was paying her bit of space in a magazine or newspaper, or on a billboard—although that, of course, brings up the question whether she could have bought all this labor and movement and time for so little, had not a large demand and multiplied quantity output cheapened the product by ever so much more than the advertising cost.

An army of men, all in all, had been working for Elizabeth, without her knowing it and without their knowing that she was to be beneficiary. Sweating coolies in the tropics had gathered spices for her pleasure. Grimy miners had dug the ore which went into that metal cap, and in a distant jungle swart men had felled the tree to get the cork wherewith it was lined. In some factory, perhaps beside the Mississippi where sand is plentful, an expert glass blower (whose high wage goes in part to the purchase of tiny sweet pickles at eight for a quarter) had fashioned the bottle in which they reached her.

In a southern forest brawny men had brought down the pine trees from which the box was made, and it is possible that the paper in the corrugated wrapper was due to the heft of Canadians. An American son of the soil had planted and tended and fertilized the vine whence came those cucumbers. And how many other Americans had dug the fuel and manned the power houses and tended the vats whence came the fuel and light and ice she used!

This is to say nothing of the shellac on the metal cap, nor of the lithographers and printers and pressmen who put their efforts into those labels, nor of the girls who pasted them in place. It says nothing of the inspectors and the factory workers nor of the warehouse watchmen, nor of the jobbers and their clerks, nor of the brokers and their accountants. It says nothing of the salesmen, all along the line. It says nothing of the locomotive engineers and switchmen, nor of the chauffeurs and teamsters she put to work.

Back of Elizabeth's purchase there lay, in fact, a vast and intricate machinery, which her appetite for sweet pickles had set into motion. The telephone had trilled and the telegraph had clacked that she might buy when and where she pleased. Insurance men had written policies that she might not be disappointed, and bankers had extended credit, and landlords had collected rentals.

Taking it by and large, it may be said that Elizabeth got a lot for her quarter. There wasn't any profiteering, apparently. From every corner of the habitable globe dainties had been gathered to please Her, the arrogant Ultimate Consumer.

And yet eight dwarf cucumbers, however temptingly prepared, come dear, looking at it another way, when they are three cents each. Even allowing a penny as the value to Elizabeth of the empty bottle, the price of the pickles was high. That probably is because American genius has devoted itself almost exclusively to production and too little to distribution.

The great problem of the man who made those pickles was how to get them to Elizabeth's table. That is a problem which for eight months a Joint Congressional Agricultural Commission, under the leadership of Representative Sydney Anderson, has been studying in its minutest details; and from Mr. Anderson's office came most of the facts in this sketch of the processes behind this particular transaction. The commission expects to complete its labors about the middle of April, and to give out some figures on the costs attending movements of commodities and changes of ownership which will help Elizabeth and the rest of the buying public to understand better the causes back of retail prices.—S. B.

Is Price Cutting a Crime?

By JOHN WALSH

Former Chief Counsel, Federal Trade Commission

IS A MAN who cuts prices a wrongdoer? From all over a country harassed by prices that rose too rapidly and fell too slowly comes a thundered answer: "No!"

Yet the Federal Trade Commission and the courts have from time to time ruled that price cutting and discriminations in prices may be very effective and very improper methods of competition.

In an earlier article in The NATION'S BUSINESS I outlined the twilight zone between practices plainly improper and others as plainly law abiding. Perhaps I might again cite two cases at the extremes of unlawful and lawful price cutting. One is a much-cited court decision.

A man went into a barber shop to get his hair cut. He didn't like the way it was done and said so. The barber didn't like what he said and said so. The debate flourished until it came to a point where the barber suggested that his customer go to a place where he could have his hair singed permanently and without charge.

The customer went out breathing vengeance and in a short time his method was plain. A vacant store as near as possible to the barber shop was leased, a barber installed and a large sign announced:

> HAIRCUTTING AND SHAVING FREE

The aggrieved barber went to the court, got damages and enjoined his vengeful customer from carrying on a barber shop where prices were cut to nothing.

Here's a case at the other end of the line: A manufacturer of tools was brought before the Federal Trade Commission on a complaint of competitors that he was selling below cost, and that he had reduced prices to drive them out of business.

The manufacturer was ready with his answer. He had not sold below cost, as his books would show. He was making a profit and a profit that satisfied him. He had, as it happened, a large supply of low-cost natural gas which enabled him to produce his product cheaply. If his competitors could not, was that his lookout? If he raised his prices beyond a reasonable profit to catch up with competitors, would he not be doing a wrong?

There seems to be but one answer. The manufacturer could not be accused of cutting prices unfairly. I recall another case which

came informally before the Federal Trade Commission when I was its chief counsel. Complaint was made against a large manufacturing company that it was selling below cost for the purpose of killing competition. Its executive head came before the commission and was ready with a simple explanation. His product called for large quantities of cotton and linseed oil and his company had purchased largely when prices were low and prior to a war-time boom in both these staples.

Was he not justified in passing on to his customers the benefit of his shrewdness in buying? And if competitors couldn't meet the price, could he do anything about that? They were as free to catch him napping as he had been to catch them.

These are the extremes, but they serve to illustrate the points which are involved. Price cutting, when its sole purpose is to put competitors out of business, may well come under the ban of the Federal Trade Commission. Here is a wholly imaginary case which will illustrate how difficult of decision these cases might be.

The Blank Company makes a food product of general household use and has built up a successful business in one part of the country. Wishing to widen its field of operations, the company enters a new and competitive territory and sells its product at a price lower than its competitors and lower also than its own prices in the district where it is well established.

Is such business practice an unfair method of competition under Section 5 of the Federal Trade Commission Act, or is it a price discrimination under Section 2 of the Clayton Act?

If the manufacturer, invading new territory, is selling both below his own cost of production and below the prices fixed by his competitors, it might well be held that it was an unfair method of competition. But other factors may be involved. Suppose the Blank Company finds that to meet competitive prices in the new district it is obliged to make a price that not only is lower than his cost of production but lower than its prices in the district where it has been long established. There would come a new and highly debatable question. Is the price cutting in the new territory a discrimination against its older customers? The head of the Blank Company may have said to himself:

"Even if I lost money for a while, I'll get folks used to Blank's Biscuits, and after a while they'll be ready to buy them even at a higher price, or, it may be, by erecting a new factory, I can keep the present prices down."

That sounds like a reasonable point of view, yet here is a case with some points of likeness, yet where price cutting was plainly under the ban. A maker of household articles in a mid-west state had built up a business on the Pacific coast. His far-western prices were fairly and properly based on his prices in his nearby market plus the freight. A rival started a factory on the Pacific coast and was able to undersell him. Thereupon the mid-west manufacturer reduced his Pacific coast prices to a parity with his prices near home. In effect he sold below cost by absorbing the freight, and he did it, it was plain, to force the competitive factory to quit the field. That would seem to be an unfair method of competition, yet the mid-west manufacturer might well have argued to himself that he was only doing it to hold a market until he was able to devise other means of meeting competition.



One form of price cutting which would clearly seem to constitute unfair competition, is the fixing of one price to A and another to B. Yet here there may be factors which cloud the issue. You are, let us say, making golf clubs and selling direct to retailers. In one city there are two dealers who sell your golf clubs, which are high grade and correspondingly high prices. One dealer specializes on your output, shows them in his window, advertises that he is a dealer in your "Auld Bobby Burns" clubs and is altogether a desirable customer. The other sells chiefly cheaper clubs but carries yours because he wants the high-grade line for appearance.

Plenty of Ways to Cut Prices

YOU are reluctant to cut off the second dealer. After all, an exclusive agency has its disadvantages. What easier than to give dealer number one a discount on orders over a certain amount, that amount being out of reach of dealer number two. There is a form of price cutting, or rather price discrimination, which might bring you under the ban of the Commission.

There is more than one way of cutting prices. If I give you two things for one price, I am cutting prices quite as if I had shorn in two my set figures. A practice of that sort came of a baking company which undertook to give free to every customer an amount of bread equal to his purchases. This was attacked as intended to stifle competition, and the commission ordered the company to quit its free bread campaign. In this instance, the case went into the Federal Courts where it was held that the commission had no jurisdiction because the conduct complained of was not in interstate commerce.

Another form of price cutting which attracted attention was that of a mail-order house which offered sugar at a low price on condition that a certain amount of other groceries was ordered. There the selling was coupled with misrepresentation, the effect of which the commission thought—and the court agreed—was that the company injured its competitors by leading the public to believe that the competitors were unfair dealers in sugar. As a matter of fact the company complained of was selling the sugar below cost. A Circuit Court of Appeals in that case said of the Federal Trade Commission Act:

> We find in that statute no intent on the part of Congress, even if it has the power, to restrain an owner of property from selling it at any price that is acceptable to him or from giving it away. But manifestly in making such a sale or gift the owner may put forward representations and commit acts which have a capacity or a tendency to injure or to discredit competitors and to deceive purchasers as to the real character of the transaction.

Another equivalent of price cutting or price discrimination which has attracted the attention of the Federal Trade Commission is the practice of selling or lending below cost equipment to dealers. In return the dealer is not to sell a competitor's product. A number of oil companies were before the Federal Trade Commission on the charge of supplying free pumps and tanks to retail dealers in gasoline.

The commission issued an "order to cease and desist," and the case went to the Circuit Court of Appeals, which took a different view and incidentally delivered itself of an opinion as to the commission's power over prices.

After holding that it was the "undoubted right" of the oil company "to furnish any and every purchaser such containers and conveniences to aid him in delivering the gasoline into the possession of consumers as it might see fit and at such cost as it might see fit," the court went on:

> The right to fix prices is not given to the Federal Trade Commission. The only cases where the question of price has come into consideration have been those wherein the making of a price—in some cases high, in others low—has been used as an element in some fraudulent scheme of oppression. The price which one may put upon that which he has to sell or lease is a matter wholly his own.
>
> Competition is not an unmixed good. It is a battle for something that only one can get; one competitor must necessarily lose.

The court further said that what the oil company did was nothing more than loaning a barrel with a faucet on it and added:

> The fact that the tank and pump are much more expensive does not make the transaction different nor unfair. If that is not true then the law must mean that the Trade Commission is set as a watch on competitors with the duty and power to judge what is too fast a pace for some and to compel others to slow up; in other words, to destroy all competition except that which is easy. We are of the opinion that Congress did not intend to bestow any such power and that it did not intend to do more than to eliminate the almost infinite variety of fraudulent practice from business in interstate commerce.

The question of price discrimination as means of unfair competition is one on which the law has not yet thrown much light. The commission's power is limited to Interstate Commerce and to cases in the District of Columbia, so that the relations of retailers to each other and to customers have had but little attention. An effort to proceed against a dry goods store in a large eastern city because it was competing unfairly by selling below cost a standard brand of men's underwear failed because of the interstate commerce provision.

Price cutting on trade-marked or branded goods is a field in which many business men would welcome more definite ruling. It is contended that cutting of prices on such goods is unfair since the competitor has no refuge in presenting an argument of superior quality or service. There, however, we approach the debatable ground of resale prices.

Price cutting as a competitive weapon is like having a hammer. It's all right to own it and to drive a nail with it, but you mustn't hit the other man over the head with it. What if the other man gets his head in the way? Well, there the law may step in.



The Business Stand on the Bonus

By MERLE THORPE

PROTAGONISTS of the soldier bonus, for and against, bring to their support evidence of public sentiment. Congress, with ear to the ground, listens intently, in its effort to register the will of the people on the statute books. Zealous ones try to get access to the law-making ear and amplify the low voices of the cross-roads and grass-roots. With greater or less effect, depending on the individual law-maker.

Yet there is little evidence of the will of the people on this subject that is not mere opinion, opinion that would be ruled out by any court of law. A letter, a resolution, a chance conversation—and a general sweeping deduction is drawn. In this welter of conjecture it is refreshing to contemplate the judgment of one group of citizens, the business men, as formally declared by vote, after forty-five days of discussion and deliberation, and with both sides of the question fairly set forth before them. True, it is not conclusive of the will of the whole people, but it is the best and most comprehensive indication of the wishes of a large cross-section of the country. And in this lies its significance.

The attitude of the business public, as represented through business organizations, is clear. The result of the referendum of the United States Chamber of Commerce submitted to its fourteen hundred organizations, with an underlying membership of seven hundred thousand, is unequivocal. The voice of American business answers:

For land grants	YES
For vocational training	YES
For cash or certificates	NO

Generous treatment without stint for the disabled, sick and wounded, constructive help for the healthy and uninjured, but a cash dole for all.? No! Seventy-two per cent of the ballots cast, representing 282,373 business men, were against the cash or certificate plan; as large a per cent was in favor of land grants or vocational education.

As in a well-ordered democracy, the National Chamber speaks only the voice of its constituent members. Its members, therefore, commit the National Chamber in favor of constructive help in the form of land grants and vocational education, with all its attendant expense, and against a cash or certificate bonus. On a housing program it has no recommendation, as two-thirds is necessary to commitment.

This vote reaffirms the position taken by delegates to annual meetings in 1920 and 1921. Advocates of the cash bonus have contended that these declarations did not represent the sentiment of American business today. The charge has been persistently made by veteran organization leaders that the pending bonus measure was not generally understood; that once explained to the Chamber's membership, the previous action would be overwhelmingly reversed. It was with a desire to be perfectly fair, to learn if there had been a change in sentiment, that the referendum was taken. The answer was forthcoming.

The plebiscite was nation-wide. Business organizations in every state but one declared their judgment. The vote was larger than the vote of annual meetings and more decisive. Both sides of the question were presented fairly and fully. The fairness of the presentation was attested by the commander of the American Legion, who wrote to the president of the Chamber:

> There is no doubt in our minds that in your referendum every attempt has been made to present both sides of the question completely, but I cannot refrain from calling your attention to some seeming discrepancies . . . not more probably than would creep into any such document. . . .

While the vote was being polled a thorough and vigorous campaign was carried on by veteran organizations advocating the cash bonus. Representatives of these organizations presented the bonus side in person before chambers of commerce. Thousands of veterans themselves are members of chambers of commerce and trade organizations. In many instances they sat as members of local committees while the questions were being debated.

It is apparent from a study of the vote that the more fairly the question has been studied the greater has been the reaction against the bonus; the more vigorously the proponents of the bonus have presented their views the more voluminous have become the protests against it.

At the present writing no one can predict what Congress will do. Members have been informed by the President that the Administration will not approve any proposition which does not carry with it a plan of raising the billions that would be needed to pay a bonus. The public has balked at every proposal for increased taxation and one of the latest suggestions for a certificate plan has found no favor.

A trait of the American public is that it is reluctant to bestir itself into concerted opposition to a proposal with which it is not in sympathy until the time arrives when it becomes evident that it must act with force if the unpopular measure is to be defeated. This is the situation that has existed with regard to the proposed general cash bonus for ex-service men.

Aside from the revelation of country-wide opposition to a cash bonus as developed in the Chamber's referendum, there is abundant other evidence of such a sentiment on the part of the public. This opposition has crystallized rapidly in recent weeks. A flood of letters is reaching the Executive and members of Congress, telling how people feel. One member of Congress checked his mail for ten days and found that out of seventy-five letters received on the subject only two advocated a cash bonus.

Propaganda put out by some of those who have fought for the cash bonus has carried the slur that business men are against measures calculated to benefit ex-service men because of financial reasons.

The Chamber has never been against aid for veterans. For the last two years it has advocated adequate provision and care for the mentally and physically disabled veterans, and after that constructive measures for the healthy and uninjured, these measures to include vocational training, home building, and land settlement aid. The principle of veteran relief for which the Chamber stands may be found in the history of this Government from the time of its inception. Washington and his soldiers were given land grants, and the West was largely built up through land opportunities made available after the Civil War. Therefore the Chamber is not even opposing the so-called adjusted compensation bill pending in Congress. It is fighting, however, the provision for a bonus paid in cash or by certificates.

The Disabled Must Be Cared For

ADEQUATE measures for the disabled will continue to be the main proposal in the Chamber's program for veteran relief. A present expenditure of more than one million dollars a day for disabled men is evidence of the desire of the people that veterans who suffered physical or mental impairment shall be cared for adequately until returned to a life of independence and usefulness. Beyond that point the Chamber will continue to advocate legislation for the benefit of healthy, uninjured veterans, which will include opportunities for vocational training and land settlement aid, constructive measures which are calculated to make every ex-service man an independent, self-respecting member of the community.

The Chamber does not contend that the measures which are advocated in the adjusted compensation bill are the best that might be devised. It is unfortunate that the country had not worked out within a short time after the war ended a program satisfactory to the public and to the veterans themselves.

The Vote

HERE are the propositions on which the National Chamber sought a vote and the result in detail:

I. Do you favor a national system of reclamation to be initiated through adequate federal appropriations and to be carried out for the purpose of affording ex-service men opportunity to cultivate the soil?

Organization votes in favor	1,248½
Organization votes opposed	452½

II. Do you favor national legislation and appropriations to enable ex-service men to build homes?

Organization votes in favor	1,022
Organization votes opposed	668

III. Do you favor national legislation and appropriations to enable ex-service men to obtain vocational education?

Organization votes in favor	1,378½
Organization votes opposed	316½

IV. Do you favor national legislation for a general bonus, whether paid in cash immediately or with payment deferred through use of certificates?

Organization votes in favor	467½
Organization votes opposed	1,221½

What Should We Do for the Soldier?

By ELLIOT H. GOODWIN

THE BILL sponsored by the American Legion known in its official title as the "Veterans' Adjusted Compensation Bill," and elsewhere as the "Soldier Bonus Bill," bids fair to become the main issue in the next election. The Legion "demands" its passage as drawn, the Congress is apparently willing to pass it as drawn, the Administration has given notice it will not approve it unless provisions for financing it are added to the bill. In this three-cornered mesh new suggestions of dealing with it are appearing almost daily, the latest being that of dropping the cash bonus clause *per se* but retaining the cash bonus deferred payment plan, known as the Certificate Plan, which, if done, will in the end multiply the amount paid by the Government to soldiers of the World War, as well as the disabled, several times, the total cost being in excess of five billions.

And all this on a theory of "adjusted pay" without any limit or standard to which "adjustment" is to be made. If it is an adjustment between soldiers' pay and war wages and shipyard workers, then this bill is but the beginning and a small part of the adjustment. If it is the total adjustment of the theoretical differential, then obviously to be either fair or justified it would have to differ with the different pay of army grades included, and state bonuses already granted would in all cases be deducted. So it is in fact a "demand" for money based presumably on a sense of injustice and the old theory of "what the traffic will bear."

Now every good citizen wants to deal justly, even generously, with the returned soldier. Most will subscribe to the slogan that nothing is too good for those who were called upon to face the bullets for the protection of those who stayed at home. But every true American will subscribe to it with two conscious or subconscious reservations, and these are: provided, of course, that it is not an injury to the country for whose preservation they fought or an injury to the soldier himself.

The demand that the bonus should be paid regardless of injury to the country's finances was one that many veterans themselves resented, and it has led to the present situation in which the bill has been practically rejected and some acceptable substitute sought. The question whether the payment of a bonus would help or injure the soldier himself is one that has not been seriously enough considered. It is high time to review the whole situation from the point of view of what fundamentally a democratic country does owe to its returned army after any war.

"We, the people," are the nation. We have a popular form of government guaranteed by a constitution—subject to amendment—which we are bound to preserve. In times of war the powers of the government over its people for war purposes are, as they must be, plenary. Those most fitted physically and mentally to fight are drafted as soldiers. Those not drafted as soldiers can be drafted for other war purposes.

The essence of popular or democratic government is control by the people as a whole, exercised in an orderly and legal way. Its greatest enemy, its greatest threat, is control by a class, and consequently the thing to be most jealously safeguarded or prevented is the creation of classes with political power. Of all classes the most to be dreaded is a military class, and consequently the prime duty of a democratic government after a war is to reabsorb its army into its civil life, social, political, and industrial. To accomplish this no amount of effort and no expenditure of money should be withheld or begrudged.

Money with which to pay debts, support a family, build a home, secure an earning power if applied to these purposes or any one of them is an aid to the end sought. The soldier bonus bill provides money, but does it provide for its use for such or other constructive purposes? It is given to those who don't need it on the same basis as those who do, those who benefited on the same basis as those who suffered from the war. There are no strings as to its use, and a large part of it will be wasted in unproductive expenditure. It is a vast sum, but the payment to those who don't need it makes of it but a sorry dole to those who do. Is this the best that a presumably intelligent government can do for its own protection and to aid the soldier in an effort to reabsorb him into the civil life of the country? It is pitiable.

IN reabsorbing the soldier into the civil life of the country, we must keep in mind that there are some so terribly injured that they and their dependents must and should be supported in reasonable comfort for the rest of their lives. There are many partially incapacitated who to a greater or less degree will need and should receive aid, not merely medical but financial. Both should be treated with the utmost possible generosity by a grateful country. The remainder, the physically and mentally sound, should ask no more than to be given the opportunity, if they need and deserve it, as soon as possible to become self-supporting members of the nation.

The provisions of the soldier bonus bill other than the cash bonus and certificate plan are aimed at this. They provide for soldier entry into reclaimed lands, aid in home building, and vocational education. But, standing alone, are they adequate? I think not. Do they cover the case of the unemployed soldier unfitted to be a farmer, not needing to build a home, unable to indulge in vocational education? Obviously not, and yet these are undoubtedly a large majority.

What, then, is needed? Three things: To tide over the period of enforced unemployment in which a willing man is unable to secure a job; to aid the man who is on a job that provides insufficient remuneration to make him and his dependents self-supporting; to bring the man willing and capable of more accomplishment in touch with the opportunity. The soldier bonus bill does none of these except in a pitiable way.

How can it be done?

Expand the present veteran legislation to cover these three points in a proper manner. Decentralize all soldier assistance that now exists in the Veterans' Bureau and that may hereafter be provided for. Administer it with local offices that come in touch with the soldier and he with them. Bring it within his range and comprehension—make him feel it is for him, not against him.

Has Germany Come Back?

By CHAUNCEY DEPEW SNOW

Manager, Foreign Commerce Department, Chamber of Commerce of the United States

SPEAKING of German competition, American manufacturers and American merchants in numerous lines have had ample evidence that it is not a myth but a real, tangible thing that has to be reckoned with. Some kinds of German goods stare you in the face wherever you go. They are in the market all over our own country, and apparently pretty generally in foreign countries. Recognizing this, there is still a great deal of force to a point made in the March issue of the The NATION'S BUSINESS by Mr. Andrew C. Pearson, as follows:

Another fact which American manufacturers overlook is that Germany is skillful in only a limited range of products and has only a limited output, measured in the terms of the world's consuming power. When Germany is sold up, she is out of the market.

What American manufacturers are most concerned with is: Which commodities constitute the characteristic German products? Are there any new products which have become of importance since the war? What is the volume of Germany's post-war trade as compared with that of the years prior to 1914? Who has been taking it?

The precise answer to each question cannot be given, because German trade statistics have not been published for all the months since the war, nor for all commodities nor for all countries. In a pamphlet on German competition recently issued, the Foreign Commerce Department of the Chamber of Commerce of the United States has endeavored to set forth in as great detail as possible the actual figures of the course of German trade for both pre-war and post-war periods.

Before and After the War

IN a war-time publication on German foreign-trade organization the Department of Commerce gave a list of 55 principal commodities in German export trade, arranged in order of importance by value in 1913.

In the National Chamber's publication on German competition the chief German exports are ranked in order of value in 1920. A comparison between these two lists is illuminating. New items have appeared, and some of the old familiar ones have dropped out. One thing should be kept in mind: German post-war export statistics do not include the compulsory reparation deliveries of coal, dyes and other chemicals, construction materials, livestock, ships, etc., to the Allies, an item that will tend to reduce the German reported exports for a number of years.

German coal exports topped the list of chief exports in 1920 and ranked third in value in 1913. The amount exported during 1920, however, 7,400,000 tons, was but 20 per cent of the amount exported in 1913—36,900,000 tons. (Round numbers will be used in this discussion.) The large quantity of German coal delivered to the Allies during 1920 is not shown as an export.

Another bit of statistical nomenclature is "paper and its products exclusive of books and pictures." This export jumped from seventh place in 1913 to second place in 1920, though with a loss in volume of from 543,000 to 277,000 tons. A group of miscellaneous iron and steel manufactures occupied third place in 1920, but in volume amounted to only 25 per cent of the 1913 exports, dropping from 5,200,000 tons to 1,300,000 tons. Malleable iron in bars advanced in value from ninth place in 1913 to fourth place in 1920. Here, again, a severe loss in quantity occurred—from 1,600,000 to 460,000 tons. The exports of coal-tar dyes took fifth place as compared with the twelfth position in 1913. A 72 per cent loss, from 643,000 to 178,000 tons, is indicated in these important commodities.

Another important commodity of interest to America is that of potash for fertilizers, which rose from eleventh place in 1913 to sixth place in 1920, though again at a heavy decline in quantity exported, of from 2,300,000 to 1,000,000 tons—a 56 per cent drop.

On the other hand, cotton fabrics fell from fourth to seventh place in value with a tremendous drop in volume, from 71,000 to 8,000 tons, owing, among other causes, to the loss of the textile industry of Alsace-Lorraine. Hardware and cutlery occupied eighth place with exports in 1920 of 90,000 tons as compared with 60,000 tons in 1913. Another textile group, silk fabrics, occupied about the same place in 1920 as in 1913, but with a loss of from 10,000 to 7,000 tons. The last item of the select ten is toys and musical instruments (exclusive of pianos and organs). This item rose from fifteenth to tenth place, though also at a severe loss of 45 per cent, or from 63,000 tons exported in 1913 to 35,000 tons in 1920.

From an inspection of the available 1921 figures all these ten commodities showed an upward export trend.

Eleven chief articles of German exports out of eighty-three actually showed greater quantities exported in 1920 than in 1913. Ninety-five thousand tons of metal, wood, and stone-working machinery were exported in 1920 as against ninety thousand tons in 1913. The increase of automobiles and airships was from 8,900 to 17,500 in number, while lumber and timber jumped from 402,000 to 874,000 tons; hops from 6,500 to 9,800 tons; printing and paper-making machinery from 6,000 to 19,000 tons; hoisting machinery from 14,600 to 23,400 tons; steam boilers and fittings from 13,000 to 31,000 tons; fire engines and pumps from 5,000 to 9,000 tons; leather and shoe machinery from 4,000 to 6,000 tons; railway ties of wood from 77,000 to 98,000 tons; and motorcycles from 3,100 to 3,500 in number.

The rest of the list all show losses, most of them very severe, the total volume figure for them being 84 per cent below the 1913 exports of the same commodities. Specially severe declines occurred in exports of coke—from 6,400,000 tons in 1913 to only 981,000 tons in 1920, or 85 per cent. Pig iron and nonmalleable iron alloys also declined heavily—from 856,000 to 126,000 tons, or 85 per cent. Exports of iron and steel blooms, billets, bars and ingots dropped from 701,000 to 20,000 tons, or 97 per cent. Machine parts of nonmalleable cast iron declined from 124,000 to 7,000 tons, or 95 per cent. Some declines were to be expected in view of the loss of the mines and the iron and steel industry in the Saar Basin and Alsace-Lorraine. Cement exports fell from 1,178,000 to 139,000 tons, or 88 per cent. Heavy declines will also be noted in exports of textiles. The German sugar exports, which amounted to 589,000 tons in 1913, practically petered out, only 5,000 tons being exported in 1920, and fragmentary figures for 1921 not showing much more. Loss of large agricultural districts in eastern Germany partly account for this fall.

Other important declines were as follows, listed in the order of value in 1920:

	1913 Tons	1920 Tons
Miscellaneous machinery, except electrical	119,000	77,000
Iron sheets and plates	650,000	248,000
Castings, forgings, etc.	176,000	128,000
Copper manufactures	85,000	22,000
Tools	46,000	24,000
Electric apparatus for lighting, etc.	35,000	15,000
Wool fabrics	33,000	4,000
Clothing, millinery, etc.	12,000	5,000
Iron tubes	207,000	84,000
Hollow glass	181,000	81,000
Steel rails, sleepers, etc.	635,000	152,000
Iron wire	463,000	84,000
Upper leather	10,000	2,000
Wool yarn	14,000	3,000
Leather goods	12,000	3,000
Pianos, organs, and parts	22,000	12,000
Indigo	34,000	7,000
Textile, laundry machinery, etc.	52,000	41,000
Electric dynamos, motors, etc.	42,000	12,000
Electric cables	48,000	22,000
Books, pictures, etc.	24,000	12,000
Sewing and knitting machines	27,000	19,000
Carded and combed wool	12,000	2,000
Steam and other power machinery and parts	97,000	22,000
Cotton yarn and twist	17,000	4,000
Fur skins	3,000	600
Axles, wheels and parts for railways	114,000	37,000
Agricultural machinery	43,000	25,000
Soft rubber goods	18,000	3,000
Nails	86,000	31,000
Sugar-beet seed	30,000	15,000
Structural iron	110,000	44,000
Electric incandescent lamps	2,200	1,200
Crude and scrap zinc	110,000	31,000
Locomotives and tenders	50,000	17,000
Lignite and lignite briquettes	921,000	324,000
Distilling, brewing, malting and sugar refining machinery	27,000	13,000
Flour milling machinery	14,000	9,000
Steam tractors and rollers except agricultural	17,000	8,000
Porcelain except insulators	48,000	7,000
Non-malleable cast-iron tubes	73,000	23,000
Wood-pulp and paper-reclamation machinery	11,000	8,000
Raw wool	17,000	600
Blowers and ventilating machinery	6,000	2,000
Wheat flour	195,000	16,000
Margarine and vegetable tallow	53,000	1,200
Rye flour	225,000	12,000
Raw cotton	52,000	700
Hides and skins	80,000	9,000
Oats	662,000	4,000
Oil cake and meal	294,000	2,000
Crude rubber	10,000	400
Rice	184,000	1,000
Wheat	538,000	2,000
Rye	934,000	1,200

Based on experience before the war, we should look for competition with Germany principally in heavy iron and steel, machinery, wire, electrical apparatus, automobiles, paper and paper products, dyes and other chemicals, and textiles. The loss of Alsace-Lorraine, the Saar, and Upper Silesia have affected the German mining, iron and steel and textile industries, reducing her production to a great extent. Besides, she will have to import a much greater percentage of raw materials—quite a different thing from using her own. Her compulsory deliveries to the Allies diminish for the time being her reported exports of coal, dyes and other chemicals, construction materials, etc. In some commodities she is obviously doing well—for example, paper goods, toys, aluminum manufactures.

How others feel about German competition in a field in which America is particularly interested—South America—is indicated by the following excerpt from the *Monthly Review of Business and Trade Conditions in South America*, January, 1922, published by the London & River Plate Bank. Under the head "German Trade" is the following:

Hamburg is shipping largely to this Republic [Argentina], but the German importer is not selling to all and sundry; indeed he is none too keen on filling heavy orders for plant and merchandise involving important capital outlay. The ships are one and all filled with German trifles, chiefly the stationery goods and papier-mache or celluloid oddments so familiar before the war, while in newsprint and art paper they have recaptured the field. In other lines, however, complaint is frequently heard that orders are unfilled—this being said of machine tools and castings—while in the mercery trade German post-war quality is poor and delivery uncertain. In short, the fears that Germany, thanks to exchange vagaries and the pushfulness of her importers, would sweep Argentine trade into her lap, now show themselves unfounded.

Where have the exports been going? During the greater part of 1920 about 65 per cent of German exports went to her next-door neighbors; some 18 per cent was taken by the rest of Europe—England, Spain, Italy, the Balkans, etc. That makes a total of 83 per cent for Europe alone, leaving but 17 per cent for the rest of the world, of which the United States took 7 per cent—just 10 per cent left for Latin America, Canada, Asia, Oceania, and Africa. Whereas before the war Russia took vast quantities of German stuff, today Russia's takings are slight, making German competition keener in other quarters in some lines. Fragmentary figures for May, 1921, showed about the same situation—perhaps a trifle more going to non-European countries. And the detailed commodity figures for May-October, 1921, emphasize the fact that Germany is still depending upon Europe, much more than in 1913, when 76 per cent of her total exports was distributed among European countries. Undoubtedly considerable quantities are in turn re-exported and eventually find their way to other destinations.

How do the figures for 1921 compare with those for 1920? Official statistics for six months of 1921 show that the average monthly exports of the following commodities were higher in 1921 than they were in 1920: Iron, copper, zinc, tin, nickel, electrical apparatus, fertilizers, ether, alcohols, etc., explosives, etc., all textile manufactures except one minor group, coal tar, oils, and products, earths and stones, ores, slag, and ashes, mineral oils, asphalt, etc., all agricultural and forest products, toys and musical instruments, firearms, leather, leather manufactures, gut manufactures, wood and cork manufactures, all rubber goods, sparterie and boats.

On the other hand, several important commodities declined, as follows: Aluminum, lead, machinery, vehicles, chemical elements, acids, etc., colors and dyestuffs, coal, lignite, briquettes, clocks and watches, furs, carvings and moldings of animal origin, gold and silver manufactures, plaited goods except sparterie, and horses.

The difference in tonnage—74,000,000 tons of exports in 1913 against 20,000,000 in 1920 and 10,000,000 tons for half of 1921—is perhaps the most striking feature of the record.

Railroad Goose and Truck Gander

By GERRIT FORT

Vice-President, Boston and Maine Railroad

MANY of our friends apparently assume that we are engaged in a competitive war with the motor trucks. Some of our well wishers and advisers tell us that if we had the will and intelligence to do so, we could drive the truck from the highway, while others counsel us not to waste time in trying to recover short haul traffic which has left us forever and which they regard as unprofitable. Let us try to correct misunderstanding and to answer some of the more important questions which are evidently in the public mind.

What are the reasons for the phenomenal growth in the use of the motor truck?

The development may be said to have started with the European War in 1914, while the transfer of freight from the railroads to the highways was also materially accelerated and the zone of competition greatly enlarged by the increases in freight rates authorized by the Director General of Railroads and later by the Interstate Commerce Commission.

Many of the truck operators regard as profitable, earnings which will pay the cost of gasoline and labor and, in some cases, help pay the next installment when due. Little attention is given to depreciation, interest on the investment, insurance against loss and damage, personal injury claims and the like. It is true that efforts are being made in the direction of standardizing cost studies, and no doubt they will be successful, but in the meantime most truck operators are making their rates strictly on their conception of what the traffic will bear and are changing them to meet conditions as they find them.

Contrast, for a moment, the different situation of the railroads; we must give to the proper regulatory body, state or federal, thirty days' notice of any reduction or increase in our rates unless we are able to convince the commission that the change should be made on shorter notice. If we could lower and raise our rates at will to meet emergent situations, some of our problems would be greatly simplified, but the public has decreed, probably with wisdom, that all rate changes must be submitted to the appropriate tribunal, state or federal. In a recent case in Massachusetts, where we proposed to reduce our local express rates on short notice to meet motor truck competition, the commission declined to give the necessary authority, and we had to wait thirty days before making the reduction effective. No criticism of the commission is implied in this statement. There were doubtless sufficient reasons to justify the withholding of authority.

In this rigidity of railroad rates, as the result of state and federal regulation, lies one of the most important reasons why the railroads cannot successfully meet motor truck competition as it exists today.

Is short-line haul and less-than-carload freight unprofitable for the railroad, and if so, why not let the trucks carry it?

This question cannot be answered in a word, nor will one answer fit the conditions of all the railroads of the country.

During periods when traffic is abnormally heavy, long haul and carload traffic is doubtless more profitable to the railroads than short haul traffic, or less than carload freight generally. Station costs have mounted more rapidly than road haul costs, and long haul less carload traffic as well as carload traffic, which is largely handled by the shipper and consignee who relieve the railroads of terminal expense, is obviously more desirable from the railroad standpoint than traffic on which the line haul is short and the revenue largely absorbed by terminal costs.

On the other hand, during periods of depression it is impossible to cut overhead expenses in proportion to the loss of traffic. We must continue to operate trains for the transportation of carload freight, and cars carrying smaller shipments are, to a very large extent, moved in the same trains. During such periods, all freight which can be secured, whether for short or long haul, assists in building up the gross revenue of the railroad and is badly needed.

We have made, and will continue to make, rate reductions on specific traffic where it appears we can successfully compete with the trucks and get back a new dollar for an old one, but we have not made, nor do we at this time contemplate making, any general reduction in our class rates with the idea of meeting truck competition.

Let us discuss this question for a moment. The class rates constitute the base of our entire rate structure, and to reduce them for short hauls where truck competition is acute would involve reductions for longer hauls where such competition is non-existent or at least negligible; or, if such reductions were not made, would create discrimination extremely difficult to defend.

It has been said that terminal expense constitutes the most important item in the cost of handling traffic, and there is some doubt whether the burden of transportation charges is equitably distributed between carload and less carload freight. To make a general reduction in class rates would tend to emphasize any maladjustment which may now exist as between carload and less carload traffic. Furthermore, the rates by truck are variable and uncertain and, frequently, highly inconsistent.

It is a practical impossibility under the regulations which hedge about railroad rates to undertake to make tariffs generally applicable which will meet truck charges unless we make them so low as to be unprofitable. When operating costs have been deflated and the time comes for a general reduction we shall get back part of the business we have lost to the trucks, provided we give adequate service, and we must bear in mind that service is a factor quite as important as rates.

This is by no means a matter of sentiment. If the truck can furnish better transportation than that provided by the railroad

at the same cost, or if it can provide transportation as good as that provided by the railroad at less cost, it is bound to get the business. The user of transportation has the right to purchase it in the open market at the most favorable terms, but should be sure he is getting the most favorable terms in the long run. Service and rates being fairly equal, the shipper ought to prefer, and it is believed will prefer, the railroad, for the sphere of the truck is limited, and the railroad must be supported if it continues to function.

Is the rapid development of highway transportation by motor truck resulting in a wasteful duplication of transportation facilities?

The statement that to build up two agencies of transportation where one can be made to serve the purpose involves an economic loss, the cost of which must finally be borne by the public, has been made so often that it may sound platitudinous, but it is doubtful whether the business world has been brought to a complete realization of this fundamental fact, or that it has fully comprehended that throughout the United States we may now be engaged in precisely this wasteful enterprise. This statement is certainly true of the New England states.

Let us illustrate this point by considering the conditions in the Commonwealth of Massachusetts, which prides itself on its fine highways. Since the year 1908 motor vehicle fees have been used to aid in constructing and maintaining highways. From 1908 to 1915 practically all of the fees were received from so-called pleasure cars. The registration at the close of 1914 approximated 100,000 motor vehicles, of which less than 7 per cent were commercial cars. The construction of highways during this period contemplated but little change in the cost of highways or the burden they carried, but in 1915 the development of the trucks began calling for much heavier road construction, wider and harder surfaces and more permanent construction from foundation to surface.

The number of commercial vehicles leaped from approximately 7,000 in 1914 to 12,053 in 1915. In 1920 the total registration of motor vehicles was 304,538, of which 52,868 were commercial cars. The registration for January, 1922, indicates a probable increase of 20 per cent in the number of commercial vehicles registered for the current year.

The Roadbuilding Bill

THE total expenditures by the state for highway construction and maintenance have grown from $600,000 in 1907 to $5,000,000 in 1920. In 1907 the counties were expending practically nothing for new construction but devoted nearly $1,000,000 to that purpose in 1920. In 1908 the incorporated cities and towns expended less than $3,000,000; in 1920 the amount was approximately $20,000,000.

The foregoing figures clearly show that motorists cannot claim to have borne the larger part, or even a fair share, of the increased cost of highway construction. In 1920 the state took from all classes of motor vehiclists, for highway improvement, $3,400,000, which is but a trifle over one-sixth of the money that was expended on highway improvements in Massachusetts that year.

In the twenty-seven years that the state has been engaged in constructing, developing and maintaining highways it has expended a sum slightly in excess of $20,000,000 for construction and $10,000,000 for maintenance. During the same period the cities and towns have, in addition, expended $180,000,000 for construction and maintenance. Of this total expenditure, motor vehicle operators have contributed, in fees, slightly less than $11,000,000.

These expenditures have, however, failed to keep pace with the mounting costs that have been created by the rapid changes in the type of road needed and the higher cost of highway construction. Before the advent of the truck a macadam road suitable for the demands of traffic of that day cost $6,820 per average mile; the exacting demands of present-day travel call for an average cost per mile not far from $50,000. The state, counties, cities and towns are faced, during the next ten years, with an expense of not



less than $90,000,000 for wider roads, better surfaces and stronger foundations.

The bridges in Massachusetts were constructed to meet a traffic demand wholly different from that of the present day, and many of them are said to be unsafe. A study made by a corps of engineers in the Department of Public Works reaches the conclusion that at least $20,000,000 must be devoted by the state, counties and cities to meet this serious situation.

The experience of Massachusetts is that of other New England states, in somewhat varying degree, and is fairly typical of any well populated state in any section of the country.

In the meantime the railroads are maintaining their own private rights of way and are employing a small army of men to make transportation safe, as well as convenient. They are also paying a large share of the taxes which go to the upkeep of the public highways which are used, practically free, by their unregulated competitors—the trucks.

Now it is obvious the trucks cannot supplant the railways in the handling of long-haul traffic, or of low grade commodities of great bulk. Someone must support the railroads. It is possible—though unjust—to make all, or a part of existing railroad securities valueless by restrictive federal and state regulation while furnishing at the same time free rights of way and police protection to a competitor unhampered by the often irksome regulations which beset the railroads; but the public interest will still require the operation of the railroads, and who is going to foot the bill? The answer is, the public.

What is the proper place for the truck in a comprehensive transportation scheme?

The obvious advantage of the truck over the railroad is that it picks up its load at the door of the consignor and delivers it at the door of the consignee, while at present all less-carload freight moved over the railroad must be rehandled once, and perhaps twice, at both the point of origin and destination. Where the haul is short the truck performs this service with greater convenience and more economically than the railroad.

Just how far the railroad is justified in sacrificing short haul traffic to the truck, and just how far the truck can go in successfully competing with the railroad, is a question that cannot be satisfactorily settled until the trucks are put on a proper basis and make their charges accordingly, and until the railroads reduce their present abnormally high local rates.

The British and Canadian railroads have long provided store door delivery in connection with their road-haul service, and certain of the British railroads are now operating motor trucks over the public highways in connection with their own systems.

(For the information as to motor transport in Great Britain the writer is indebted to Mr. Robert P. Skinner, United States Consul General.)

Since the war the British railways have been faced with precisely the same trouble as we are encountering in the United States. Motor traffic has been making great headway and is viewed with considerable alarm by the railways. A high authority informs us that in his opinion the danger is somewhat overestimated, because motor traffic will ultimately have to bear its proportion of taxes for the maintenance of the highways. He doubts, furthermore, whether many of the Motor Transport Companies are setting aside the proper sums for the repairs and renewals of their vehicles. However, to quote our informant: "Be that as it may, the road competition is reaching serious proportions," but he adds, rather naively, that "this is competition which is not likely to become serious in America for some time, as a fine system of highways is essential for its existence and such roads are not general in America."

The Ministry of Transport in Great Britain appointed a committee, January 12, 1921, to inquire into the question of the "running by railway companies of road services for goods traffic."

The committee's rather extended report states that at the present time a considerable bulk of good paying traffic is being diverted from the railway lines; and the railway companies desire, if they can, to recover that traffic, either by the railways, or, if this is impossible for short distances, by means of road traction.

The Way to Fight Fire

ON the other hand, the proposal of the railway companies to enter the highway transportation business is being opposed by the truck operators on the ground that the railway companies are likely to charge such rates for conveyance by road as would make it impossible for independent carriers to continue in the business.

The North Staffordshire Railway Company and the Great North of Scotland Railway Company have obtained statutory powers to carry goods upon the roads. The Lancashire and Yorkshire, the London Northwestern, the Midland, the London Southwestern and the Southeastern and Chatham railway companies are all operating over the highways with or without statutory authority.

Some members of the committee seem to think that it would be desirable to allow the railway and truck operators to emulate the Kilkenny cats and that there would be no injustice if the same fate befell the railway

companies in the future that befell the stage coach proprietors and the owners of canals in the past. However, this appears to be a minority view, as the committee states that it cannot contemplate such a fate for the British railways who possess a nominal capital of £1,300,000,000 without seeing that such an end to railway enterprise would mean widespread ruin and a national crisis from which the state could hardly hope to recover.

Observe how closely the English experience parallels that of our own country.

Before the relative spheres of the truck and the railroad can be established with results that will be satisfactory to the public, and with reasonable permanency, it seems to the writer that the following things must be done:

1. *Require the truck operators to pay their fair share of the cost of highway construction and maintenance.*

A uniform basis for licensing trucks throughout the United States would be desirable. Today there are seventeen different bases in the various states; the license fee a 5-ton truck varies from $5 to $300 per year. It is believed that in no case does the truck return to the state the outlay which its operation costs.

If highway improvement is to continue, and it must continue, there are three methods of meeting the cost:

1st, a direct tax levy upon all the people of the state.

2d, by passing the cost on to posterity through the issue of bonds. This is the more common method today. Engineers agree that today there is no such thing as a permanent roadway and that highway construction for some years to come must be viewed as more or less temporary work. To place the burden of the cost of these temporary highways upon our children and our children's children is neither fair nor wise.

3d, the final method, and the correct one, is to place upon the more direct beneficiaries of improved highways—that is to say, the truck owners and operators, a just share of the cost of securing them.

2. *Place truck lines which are engaged in the business of common carriers between incorporated cities and towns under the supervision of the Interstate Commerce Commission and the state regulatory bodies.*

The minimum and maximum rates of common carrier trucks ought to be regulated just as railroad rates are regulated and a certificate of necessity and convenience from the proper authority should be required as a prerequisite to the establishment of a commercial truck line between cities and towns.

A man who is engaged in trucking operations on a large scale between Boston and certain manufacturing cities more than 50 miles distant complained recently that, while he attempted to maintain a stable tariff and treat all his customers alike, not less than three competitors were operating between the same points and pirating on his business by cutting rates, with the result that none of them were making money. Perhaps this situation might be viewed with equanimity by the public if the truck owners alone were concerned, but what is the use of multiplying the truck nuisance on public highways when one line could satisfactorily handle all the traffic at reasonable rates supervised by public authorities in the public interest?

3. *Scale down the present short-haul railroad rates as promptly as possible.*

This cannot be done generally until there is a further liquidation in the operating costs of the railroads or until there is a material increase in the volume of traffic. In this article an endeavor has been made to explain why the railroads cannot make a general reduction in their rates with the idea of meeting motor truck competition. Any attempt to do so today would soon come to be a no-bottom proposition, ruinous alike to the truck operators and the railroads.

4. *Coordinate as fully as possible the service of the railroad and the trucks.*

Whether we follow the British plan, or arrange with subsidiary trucking companies to serve groups of railroads somewhat as the express companies have served and are serving them, or with independent operators, is of secondary importance to the public so long as both agencies of transportation are utilized with the maximum of convenience and economy.

The Erie Railroad has recently opened "inland" freight forwarding and receiving stations in New York City, and motor trucks, fitted with containers, are utilized to transfer freight between such stations and the New Jersey terminal, as well as to transfer shipments direct between the New Jersey terminal and shippers' and consignees' places of business.

The New York Central and other lines are experimenting with containers or demountable bodies which can be transferred between truck and freight car without rehandling the contents of the container.

The Boston and Maine Railroad is making a study of the whole field of truck and railroad operation with the assistance of a motor transportation expert, who is a member of the staff of a large truck manufacturing company.

These studies ought to result, and no doubt will result, in better transportation service, to the mutual advantage of the public, the railroads and truck manufacturers and operators, but in the meantime it is to the interest of all concerned—and the public is the group most vitally concerned—to stablize the operation of trucks and place them on a "pay-as-you-go" basis.

One serious obstacle at present to the successful correlation of railroad and truck service is the financial condition of the railroads, which are not in position to incur capital expenditures that savor in any way of experimentation.

The truck has come to stay; railroad men who have not sufficient imagination to realize that it is working an economic change in transportation conditions which is little short of revolutionary are lagging behind the procession.

Railroads have a right to expect that common carrier trucks be regulated as they, themselves, are regulated in the matter of their income and expense, and enlightened self-interest, as well as a spirit of fair play, may be depended upon to crystallize public opinion accordingly. Truck manufacturers and truck operators cannot hope to take the place of the railroads. The results of hothouse propagation and hot-air propaganda are evanescent and unsatisfactory, and there is no doubt that most of the responsible corporations and individuals engaged in the trucking industry realize that in the long run they will fare better if they seek to supplement railroad service rather than to supplant it.

Speaking for the Motor Truck—

By A. J. BROSSEAU

President, International Motor Co.

THESE United States cover a great deal of territory. It is natural, therefore, that the men who built up our system of railroads should think in great distances. And being a country where freight was produced in vast quantities, it was just as natural for them to think also in bulk.

As a result we have a magnificent web of railroads covering the country, but they are planned and operated for big shipments and long hauls, which carries with it the implication of huge terminal and warehousing facilities. They can pick up 10,000 tons of coal at the mouth of a West Virginia mine and deliver it at tidewater with neatness, dispatch—and economy. But it is a different story when they have a few barrels of paint to carry from New York, say, to New Rochelle, with a consignee calling for immediate delivery.

If some genius could have happened along at the time when our railroad development was in its infancy and projected a motor truck at the same time, our transportation problem would be largely solved. But none appeared and consequently, in their efforts to generate the profitable long haul, railroad men were forced to build hundreds of miles of spurs and feeders by means of which the freight was brought in carload or less than carload lots, redistributed and sent on its way over the main lines.

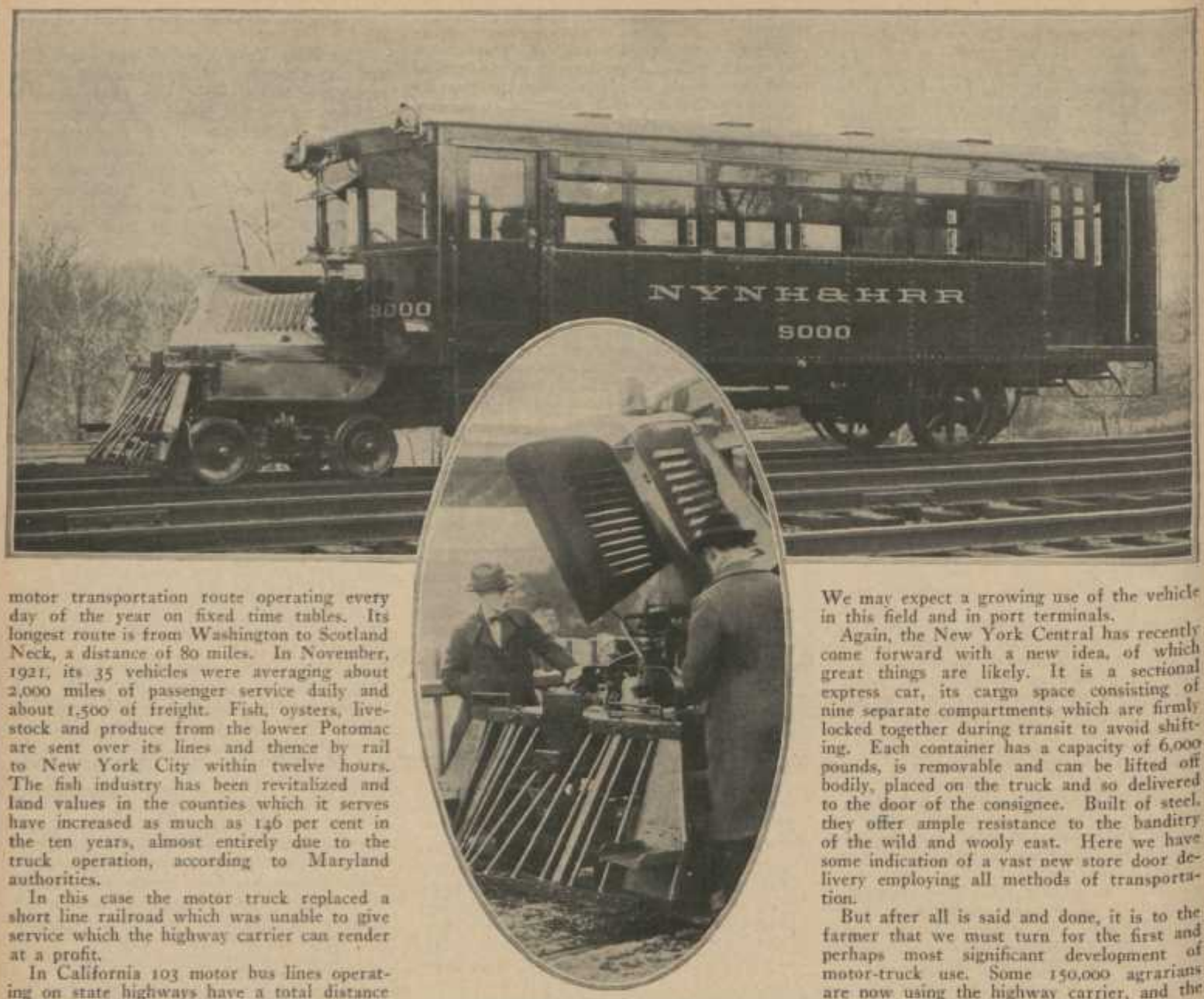
From the first this operation while necessary was generally unprofitable, chiefly for the reason that as the distance between two terminals decreases the overhead cost increases and there finally comes a point where a full assessment of costs would be prohibitory. Accordingly, as a matter of business development, the long haul had to absorb part of the short haul cost and it is still doing so today.

The first job, then, of the more flexible motor truck is to relieve the railroads of the unprofitable short haul and leave them free to develop the overland carriage. As this is accomplished it will be found that the need for $1,000,000,000 estimated annual expenditures for rehabilitation and extension of railroads, will decrease.

In stating the problem, however, it is necessary to remember that the motor truck, while a healthy and growing member of the automotive family, is still but four years old and his education is anything but complete. It will take time and a good deal of research to determine just what his place is going to be in the transportation world. Meanwhile, the best we can do with a reasonable knowledge of his environment and characteristics is to indicate his probable sphere.

Naturally one of the first questions which is asked is: What is meant by the short haul? Well, that is a variable, which will range all the way from 40 or 50 miles to 200 miles, depending upon geographical conditions, rail and water facilities, and most of all upon the needs of the public.

Down in Southern Maryland there is a



One example of how the railroads can make use of trucks. They have been found profitable for short haul passenger work and more and more roads are investing in them.

motor transportation route operating every day of the year on fixed time tables. Its longest route is from Washington to Scotland Neck, a distance of 80 miles. In November, 1921, its 35 vehicles were averaging about 2,000 miles of passenger service daily and about 1,500 of freight. Fish, oysters, livestock and produce from the lower Potomac are sent over its lines and thence by rail to New York City within twelve hours. The fish industry has been revitalized and land values in the counties which it serves have increased as much as 146 per cent in the ten years, almost entirely due to the truck operation, according to Maryland authorities.

In this case the motor truck replaced a short line railroad which was unable to give service which the highway carrier can render at a profit.

In California 103 motor bus lines operating on state highways have a total distance of 6,074 miles between terminals and the longest through trip possible is 1,488 miles.

In Connecticut recent surveys made by the United States Bureau of Public Roads indicate that the average loaded haul in that state by motor truck is 47.7 miles, and in specific cases in the west and south, where rail-line development has not been extensive, motor trucks are hauling all manners of commodities distances ranging as high as 250 miles.

In some of the short hauls in highly developed rail territory, an examination of the records may show in some commodities that the rail line can haul more cheaply, yet it will be found that the business is going to the motor truck. The answer is here found in the element of time and further in the fact that once on the truck, the commodity stays there till it reaches the store door or home of the consignee. Service has always been a large factor in busines life in this country, and it will always be the public which will finally determine the range of haulage as between motor truck and railroad.

In still other instances, the railroad itself is meeting the situation through the development of motor vehicle traffic on the rail line. Fourteen roads are now using flanged wheel gasoline motors on stubs or short lines where passenger or freight haul does not justify standard equipment, and we may reasonably expect to see more of this development in the future.

A third phase is found in some states such as Colorado where the abandonment of rights of way by the railroad has been followed by use of the roadbed grade in the construction of modern highways over which motor service has since developed. In fact the time may come when the railroads themselves will make use of this type of service. Proper management will undoubtedly make it a profitable field, although, as one railroad executive has suggested, it may be necessary for the truck companies themselves to train the personnel for operations of this character.

But, after all, hauls of the character mentioned are but a few of the places where the motor truck is today performing a service in transportation. From the railroad standpoint perhaps one of the most interesting developments of all has been that at Cincinnati where a fifty-five month operating experience has demonstrated the ability of the motor truck to relieve the rail lines of the trap-car, shuttle service between termini. We may expect a growing use of the vehicle in this field and in port terminals.

Again, the New York Central has recently come forward with a new idea, of which great things are likely. It is a sectional express car, its cargo space consisting of nine separate compartments which are firmly locked together during transit to avoid shifting. Each container has a capacity of 6,000 pounds, is removable and can be lifted off bodily, placed on the truck and so delivered to the door of the consignee. Built of steel, they offer ample resistance to the banditry of the wild and wooly east. Here we have some indication of a vast new store door delivery employing all methods of transportation.

But after all is said and done, it is to the farmer that we must turn for the first and perhaps most significant development of motor-truck use. Some 150,000 agrarians are now using the highway carrier, and the potential field is a large one.

One of the first effects of the truck use has been to broaden the farmers' market, as is best indicated by surveys conducted by the Department of Agriculture. Of some 800 farmers queried in the eastern farm belt, more than 25 per cent said that they had shifted from markets an average distance of 6.9 miles to new markets 17.6 miles away. Of the rest, many already had first-class markets at hand. It is significant that the first service of the truck was speed, whereby they were able to handle loads more expeditiously and thus to hold their farm hands on the farm. This is disclosed in another survey by the department which showed that, while the farmer hauling corn, wheat and cotton to market had previously hauled 1.2 loads daily an average of 9 miles, through the transition he is now averaging 3.4 loads and hauling them 11.3 miles.

It is worth noting further that not only was this service performed more cheaply, but that, as highways are improved, the farmer is able to hold his crops longer, thus stabilizing the market instead of selling when everybody else is doing so.

What does this shifting mean in terms of a new realignment of our methods of distribution and buying? Only the future can tell.

Rural motor express, operated in a co-

operative manner where single farms could not support a truck alone, is already in practice in Maryland and elsewhere, and the farmer's gate seems destined to become the shipping platform of tomorrow.

The milk industry is a remarkable instance of this, while the whole range of perishable commodities is now inclining more and more to the modern motor vehicle. A notable example is found in the carriage of livestock where farmers make actual savings of thousands of dollars yearly through transporting hogs, cattle and sheep to such centers as Indianapolis, Omaha, St. Joseph and other large points by motor truck. Driven in on the hoof, or delayed in transit, the animal loses pounds of weight. The saving so made is thus direct and easily determined.

Within city limits, the commercial haulage field is proving a profitable one and large building operations are now carried on by truck. Radial deliveries in less than carload lots by retail stores, oil companies and other merchandisers can be found in every large city and the business so done has generated new markets, broadening out the economic radius by forty, fifty, even more miles.

President Harding said, just before he took office, that "we must foster the use of motor trucks and build urban terminals for truck service to make new ties between city consumption and country production." This movement is already in progress in many of the larger cities such as New York, Rochester, Buffalo, St. Paul, and Los Angeles. Service is the fundamental characteristic of these lines, and shippers, as usual, appear to be glad to pay for it.

School children are going to modern community schools in motor busses nowadays, and the picturesque red school house of yesterday is passing. Better paid instructors, better facilities at lower total costs to the taxpayer result.

The field of public service is another and a large one which is so generally known as to require no more than passing mention. The truck is used in building highways, in ambulance service, in fire prevention, snow removal and endless other tasks.

Of course any discussion of these questions at once calls for an inquiry as to whether the motor truck is paying its just proportion of the cost of highway construction and maintenance.

Senator Charles E. Townsend, Chairman of the Senate Committee on Post Offices and Post Roads, recently declared on the floor of the Senate that "there is no more reason why trucks should be taxed than freight cars separately because they are engaged in a business which is of the utmost importance.

"Automobiles and automobile trucks pay, perhaps, a heavier tax than is paid by the various implements used by the people. They are practically supporting the roads; they are maintaining the roads, and in some of the states they are building the roads by the taxes that are put upon them."

The operators of motor vehicles are willing to meet the cost of road maintenance and are doing so, as Senator Townsend's statement just showed and as is substantiated by revenue analysis. In 1920 the motor vehicle fees amounted to $102,546,212, of which only $59,414,039 was spent for maintenance of highways under the supervision of State Highway Departments.

In 1920 motor vehicles paid in federal excise taxes—that is the tax paid when the machines are bought—$148,720,800. These excise taxes still remain on motors, but they have been removed from rail traffic. In municipal registrations and franchise fees automobiles paid $11,000,000 in 1920. The National Automobile Chamber of Commerce estimates that the total paid into the public treasuries during 1921 was about $349,000,000. There is something of the amount paid by this young industry to justify its existence. When the railroads were being started they were subsidized lavishly with both money and lands, and guaranties.

The American people have made a vast investment in good roads. Each year sees an extension of the mileage of surface highways, and it is largely a result of the extended use of motor vehicles. This great investment is essentially a declaration of faith in this form of transportation.

Planning a Big Business Ahead

By SEYMOUR L. ANDREW

Chief Statistician of the American Telephone and Telegraph Co.

A SHIP sets sail. Her captain knows that his destination is a port 300 miles northeast. Some unforeseen and uncontrollable force may arise to drive him from the course he had carefully planned and may compel him to lay a new course. But he would be a foolish captain who had no plans before he started, who left port without chart or barometer.

The statistical work of the American Telephone and Telegraph Company, in so far as it has to do with future planning for the Bell Telephone System, may be looked at in much the same way. We should be foolish if we laid no course at all, but we should be no less foolish if we laid a course that could not be altered.

It would be easy to recite dramatic instances of the work of our statisticians in charting their estimates of the future development of the business, for there have been many occasions when we have been able to make forecasts that were uncannily accurate. On the other hand, I could point out instances where, being human, we have erred.

But a mere narration of examples of this character would be beside the point I have in mind. What I want to emphasize—speaking for all lines of endeavor—is the vital necessity of charting business, of continually taking soundings along the route and of knowing exactly where we are headed, all based upon a careful judgment of the future in the light of all available facts as to the experience of the past. In my own opinion, the necessity for always looking and planning ahead will be much more essential to successful business administration in the future than it has been in the past.

Perhaps an illustration from our own business will be helpful in illuminating my point. Our construction program is estimated for five years in advance. There are within reach of the executives of this company figures on the number of new telephones which it may reasonably be expected will be installed in 1922 and in each of the following years up to and including 1926. It is on such figures as these that we make the long-pull plans for our operations, our building and our financing, these plans being subject to revision if new developments arise which warrant it.

These figures as to expected telephone growth are not based upon "hunch" but upon careful statistical studies, some of which look twenty and thirty years into the future. The development of the telephone industry has by no means approached a point of saturation. Its growth is far greater than the growth of population. More and more uses for the telephone are constantly being found, and a greater and greater proportion of the people find need for the service.

Omitting all reference to the details of the statistical methods and refinements employed, the estimate is based, in the first place, upon an analysis of the records showing the past growth of each of the principal classes of telephones, each of these classes having been found to have its own distinct characteristics as to growth. Curves of normal growth are then fitted to the data for each class, and these curves are extended over the period 1922-1926. Combining the curves then gives the expected *normal* growth of total telephones over these years, or, in other words, the expected growth *under normal external conditions.*

But, unfortunately, external conditions—that is, general business conditions—are rarely normal. One of the fundamental characteristics of present-day industrial organization is the cyclical movement of business activity through alternate periods of depression and prosperity. Business may be improving, or it may be growing worse, but it is never static. Hence, in all careful estimates as to the future, due allowance must be made for the influence of changes in general business conditions; and, accordingly, for this reason if for no other, it is necessary to study the movements of general business and to endeavor to reach some approximate measurement of them.

To meet this need as it affects the American Telephone and Telegraph Company it is one of the functions of the Statistical Division to study and analyze the general

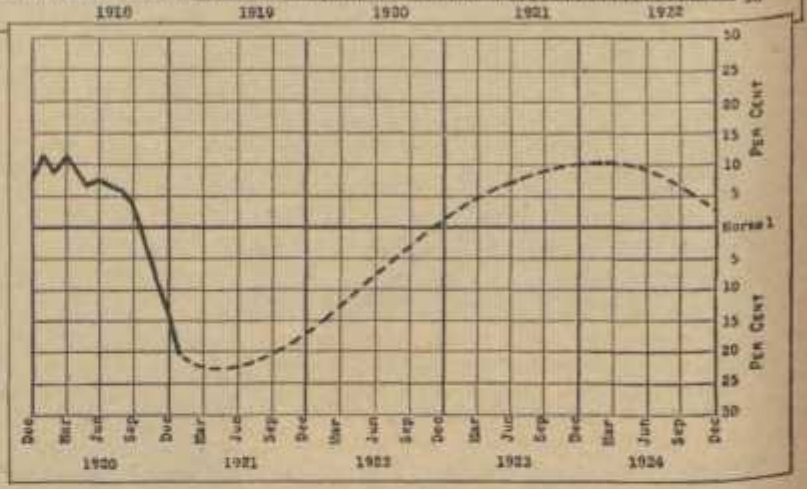
"YOU'VE printed articles telling of the need of more and better business statistics. Why don't you print one showing what business men do with what they now have?

"Do they use them? Or do they just litter up desks and filing cabinets?"

The request came from an executive of a big business organization. Here's an answer. It's the story of how one of the country's most successful businesses plans ahead, told by its statistician, but not told *for* statisticians but for the average intelligent business man.

THE EDITOR





The upper chart is the general business index curve referred to by Mr. Andrew in his article. On the right is the projection of the same curve for 1921-24 prepared by the Statistical Department of the A. T. & T. It is not a prediction but is an illustration of statistical methods.

business situation throughout the country. One product of this work is indicated by the accompanying chart which shows a general business index curve which we have developed and which is brought up to date monthly.

This index curve measures the monthly fluctuations in the volume of general business activity as compared with estimated normal, that is, as compared with the line of normal growth. The index curve is a statistical composite of such general indices as bank clearings outside of New York (corrected to allow for the effect of changes in the price level since 1914), pig iron production, railroad traffic, business failures, cotton consumption, coal production, etc.

Each of these indices is analyzed separately before it is included in the composite business index curve, and the seasonal variation in the figures is eliminated.

We should be the last to contend that this business index curve is the final word in accuracy. On the contrary, we have improved it in the past and we confidently expect that we shall be able to better it in the future. At the same time it has been found that the curve pictures the changes which have taken place in the volume of general business with sufficient approximation to be considered as fairly representative of the course of business activity in the United States. Against this curve we can compare the fluctuations of those elements within the telephone business that feel the influence of changes in the general business situation. Even in the telephone business, the growth and operation of which are relatively little affected by external influences, such comparisons contribute materially to efficient administration.

Moreover, some such business index curve is necessary if estimates of future business conditions are to be put into a concrete form such that proper allowance can be made for expected changes in business activity, in estimating future movements in a specific business. Projecting the general business index into the future is, of course, largely a matter of judgment; but if this judgment is based upon knowledge of the cyclical movements of business in the past, qualified by consideration of such special factors as may exist at the time the forecast is made, the result, if not highly accurate, should at least be much better than no forecast at all, or the "hunch" methods which have frequently been used in business in the past.

The other chart shows a projection of the general business index curve for the United States for the years 1921-24, inclusive, made by the Statistical Division of the American Telephone and Telegraph Company in the early part of 1921. Similar projections for a period of five years in advance are made each year. This chart is only for purposes of illustration of the work of the telephone company in looking ahead, as it is subject to revision and may be modified on the basis of the developments of the year which has passed since the projection was made.

It should be noted, moreover, that the projection did not pretend to predict minor fluctuations but was designed only to indicate what appeared to be the prospects for broad movements of general business activity at the time it was prepared, determined upon the basis of statistical analysis and economic interpretation of available data. It is on the basis of such projections that we are able to make allowance for expected external business conditions in estimating the future growth of telephones referred to above, as well as the future growth and movements of other elements of the telephone business.

At this point there comes, of course, the natural inquiry: "Are estimates arrived at in this way accurate?" The answer must naturally be a qualified one. The estimates cannot be considered infallible; indeed, they are not intended to be so. Their purpose is to show reasonable approximations of the direction and the extent of probable future movements; and, as a general proposition, they do this with marked reliability.

At the same time the development of statistical methods of projection has reached a point where a high degree of accuracy can no longer be looked upon as a matter of pure accident. Let me cite one example in the experience of our own business:

In May, 1921, an estimate was made of the daily number of telephone messages that would pass over a large group of long-distance trunk lines during the following month of November. The estimate proved to be within a few messages of the actual number, which was measured in the tens of thousands. When such results as this occur, scientific methods of estimating can certainly be regarded as at least greatly reducing the wide margin of error which is almost inevitable in old-fashioned hit-or-miss or "hunch" estimates.

I have spoken of our general business index and how we project it as an element in our future planning. In the same way we plot and project the course of general prices, general interest rates, etc., care being taken that the projection of each of these factors is consistent with that of the other factors.

The following is an illustration of such a projection and a further instance of how closely these projections can approximate the facts: In the latter part of 1920, at a time when the general level of prices was falling rapidly, we estimated that the course of the average price level during 1921 would lie within a certain rather narrow range. Actual developments have shown that average prices throughout 1921 moved almost midway within the estimated range.

In the Bell Telephone System it can be said that all the broad elements within the business are projected into the future. Generally speaking, the final projections are arrived at from two points of view: First, there is a careful building up of the projections, step by step and detail by detail, by the various local operating organizations throughout the country. These local projections are then consolidated by the headquarters organization of the American Telephone and Telegraph Company and compared with corresponding projections for the system as a whole made independently at headquarters. Checking these two projections against one another will show where necessary adjustments, if any, should be made and will permit a final estimate to be made which will give due weight to both local and general considerations.

These projections cover, in general, a period of five years ahead. Not only do they include the projection of such fundamental factors as the number of telephones which I have already referred to, "backbone" plant, such as buildings, conduits, cables, central office switchboards, etc., but

they also include all the principal items of revenues and expenditures as well as the main categories of assets and liabilities. But in saying that these projections are made for five years ahead, I do not mean that they are made only once every five years. Each year all projections are carefully reviewed, revised where necessary, and extended for another year.

For the first year of each five-year period, the estimates cover almost every item in the telephone business. In order that these basic one-year estimates may be kept up to date and constantly rechecked, there is in use a series of monthly reports by means of which actual results each month are compared with the original estimate and a new estimate made, if necessary, for the remaining months of the year.

Thus the original estimates are actually reviewed each month during the year, new tendencies are noted and corresponding revisions made. In short, what we always have is a detailed estimate of practically every item in the business for one year in advance and a background estimate of the broad elements for five years in advance.

Now it is obvious that the basis for any future planning must of necessity be comprehensive statistical and accounting records of the past and present operations of the business. In this connection I want to say as strong a word as possible in support of the value of charting in graphic form the significant trends, ratios, units and other facts shown by the basic records. In our own experience we have found that no method is as effective in enabling the executives to keep a finger on the pulse of the business as a presentation of the pertinent facts in graphic form.

Here at the headquarters of the Bell Telephone System we keep constantly before us chart records of the principal elements in the business, both financial and operating. This includes, for example, charts on the composition of gross revenues by main sources, the distribution of expenses by classes, the composition of assets and liabilities, growth of plant, movement of traffic, and so on—in fact, all those items which are needed for the information of, and as a basis for prompt and effective action where necessary by the chief executives.

Keeping Your Charts on Call

THESE charts may be divided into two series. First, there are "historical" charts which show annual movements over a considerable period of years. These are background charts and show the broad trends of the business in the past. Then there are "current monthly" charts which show monthly fluctuations over a period long enough back to permit fair comparisons to be made of current movements as they are recorded from month to month, but not so long as to be confusing—because, for example, of the natural growth in the figures—or to subordinate the current fluctuations.

Moreover, if special conditions arise in certain phases of the business which warrant special attention for a short time—for example, if certain minor expenses are moving temporarily in the wrong direction—special charts illuminating these particular conditions are prepared and are maintained only until the condition which gave rise to them has been corrected.

In the American Telephone and Telegraph Company we have passed the stage of having to convince anyone of the convenience and necessity of analysis and planning through the use of graphs. Indeed, the principal danger in the application of graphic methods is perhaps in overdoing it—in charting data that really have no significance and in using crude methods of all sorts in the preparation of charts. To meet this danger in our business, it is one of the functions of the Statistical Division to develop proper standards of graphic presentation.

In conclusion, there is one point that I want to make clear. Statistical work is not a monopoly of any one company or any one department in the Bell Telephone System. Each department ordinarily handles the statistical analyses involved in the functions within its jurisdiction. We feel that statistical work on any phase of the business is not a thing apart, but it is an inherent part of the particular job involved. Statistical work is centralized only where such centralization results in economy and efficiency.

Effective statistical work is profitable from every point of view, not only in our business but in every business. No lesson has been brought home more sharply during the past year than the need for more and better knowledge, and that knowledge cannot be plucked out of the air at a moment's notice. Any business that wants to know what is ahead must first have at its disposal all practicable knowledge of what is behind.

A platitude of business is, "Oh, that's all right for you folks, but my business is *different.*" As far as that goes, every business is different; but there is no business that does not need constantly to plan ahead.

An Office Tragedy

WE HAVE noted with some dismay how edibles, abetted and encouraged by the highest arts of advertising, are invading our business offices. Formerly there was an occasional executive who kept bon-bons in the upper right hand drawer, and all of us have suffered at the hands of that commercial horror, the gum-chewing office boy. But these were isolated cases of individual weakness; they were not encouraged and multiplied by mass appeal.

The significance of the latest tendencies is tragically evident in a letter that recently came to our desk. The writer may be trying to kid us, but just the same it makes easy reading, so here it is:

I am a young man, 24 years old. Being of poor but honest parents I, like many another young American, was very anxious to succeed in business. Therefore, when I accepted a position with a wholesale grocery house in a near-by city, I determined that if I failed it would be through no fault of my own. The salary to start was slight, but I was assured by the manager that there was plenty of room for advancement.

I buckled down to work and began to cast about for ways by which I could become more valuable to the organization and at the same time, better my fortunes. Naturally I read a great many periodicals, and my eye was attracted by certain of the ads.

The ones that appealed to me especially were those urging me to use certain foods, etc., since they were guaranteed to give me more pep and efficiency in my work. Determined not to overlook any bet, and swayed, perhaps, by an unfortunate fondness for sweets, I decided to try the things mentioned.

Well, it might not have been so bad if I had confined my eating to the dining-room table, but most of the ads urged me to keep the delicacies in my desk and eat them continuously. One ad. showed a meeting of a board of directors. The most forceful person in the lot was standing with a paper in his hand and demanding whether the rest of the directors had had their iron for the day. It urged all business men to eat raisins. Another display assured me that every commercial person of any importance kept a package of dates in the drawer of his desk where they could instantly be consulted if he felt fatigue coming on. Still another page induced me to buy a quantity of yeast and made me eat it when I could think of nothing else to do. Another company was kind enough to set forth a schedule by which I could most efficiently guide my gum chewing. Though it was against office rules, an alluring ad. made me smoke cigarettes by proving that a business man who didn't use this particular brand would completely lose caste. For the same reasons I took to apples, chocolate, peanuts, figs, and Eskimo Pie—keeping them, of course, filed by a system of my own in a certain top drawer of my desk.

After about a week of this intensive efficiency eating, I became suddenly ill and had to leave the office for home. The doctor said it was acute indigestion and made me stay in bed for two days.

I can see now that I might have averted disaster if the advertisements had directed me to keep my pep-producing foods in a lower desk drawer instead of an upper. But it was not to be. On my return to the office I was told that the "Old Man" wanted to see me. The reason he wanted to see me was to discharge me. It appears that when I left my office I had a couple of Eskimo Pies on file in the top drawer. During the night the room got so hot with the windows closed that the Pies melted and ran down, with the result that they unwittingly canceled a number of non-cancellable contracts that were in a lower drawer.

I ask publicity of this untoward occurrence not because of the injustice with which I have been treated, but in the hope that it may prove a warning to some other young man whose chances may be damaged in a like manner.

Using the Ocean

WORLD merchant tonnage of the sort that actually carries overseas trade did not increase during the war as rapidly as in earlier years, according to the Commissioner of Navigation. Ninety-five per cent of the world's seaborne commerce is now carried in steel steamers. In the seven years before 1914 the tonnage of steel steamers around the world increased by 45 per cent; in the seven years following 1914 it has increased only 30 per cent.

In the two periods of seven years each, however, there was a reversal in relation of the new steel tonnage of the United States to other countries' new construction. In the period before 1914, our tonnage grew by 1,260,000, while the tonnage of the rest of the world increased by 11,600,000. In the period since 1914 our new tonnage was 10,500,000 and that of the rest of the world 2,300,000. Today we have 26 per cent of the world's steel tonnage, as against 10 per cent in 1914 and 1907, and the Commissioner of Navigation believes that our own steel steamers have carrying capacity for 75 per cent of our foreign trade. In 1920 it actually carried 50 per cent.

As a measure of shipping activities, the commissioner points out that in the twelve months ended with last June the net tonnage of ships entered and cleared at our ports in foreign trade was 138,000,000. In the calendar year of 1920 the tonnage entering and clearing at ports of the United Kingdom was 73,000,000. In 1911 the figures for the United States were 65,000,000. Nineteen eleven is the most recent year for which world statistics on this point are yet available. Entrances and clearances at European ports then aggregated 606,000,000 net tons.

Of course all such figures include the same ship outward bound and inward bound, and they do not distinguish between ships carrying cargo and those in ballast.



Direct Aid for Shipping

MOST INTENSELY COMPETITIVE among American industries, and at the same time absolutely without protection for sixty years, is the characterization of the American industry of overseas transportation made by the Shipping Board at the time the President addressed Congress, on February 28.

Beginning with this assertion the Shipping Board engages in seventeen pages of discussion and ends in rather a different key; for it recommends direct aid, in subsidies, at a rate which it says works out at $2.50 a gross ton a year for the ordinary ship. This is only half the rate proposed as long ago as 1905 by the American Merchant Marine Commission created by Congress, and the Shipping Board acknowledges its rate will not suffice to make up the disadvantage of an American steamer competing with foreign steamers for overseas business. The Shipping Board says it has proposed "the least possible aid that would permit competition," i.e., that would allow an American ship to stay on the sea. This is shaving things pretty fine, but the Board is hopeful that in five years the amount of aid it suggests would result in restoring to American vessels considerably more than 50 per cent of our imports and exports.

Between the opening statement and the conclusion the Shipping Board crowded a deal of information. There are reasons succinctly stated for government aid to an American merchant marine, no less than twelve different ways in which some indirect aid can be given, the failure of indirect aids to be sufficient to permit American ships to operate in foreign waters, and the determination of the board to make the American shipowner hustle to keep going upon the amount of direct aid the Board would allow him. There will be no chance for him to grow sleek and comfortable and careless; he is going to be forced, according to the Board's plans, to give the most efficient operation that is possible of an American boat owned by Americans.

Earlier in February the Shipping Board printed a study it had made of shipping discriminations and forms of government aid since the year 1381, when England decreed that no goods might be forwarded from her ports on vessels other than British ships. In this document the conclusion was that direct discriminations were out of date in this day and generation and likely to cause more trouble than they are worth. There was a more sympathetic attitude toward discriminations in indirect trade, but they, too, were put aside in favor of direct subsidies. The Board's conclusions, announced when they were placed before Congress by the President, would accordingly seem to have been in course of evolution when the earlier document was printed.

With both House and Senate committees planning to open hearings upon the recommendations of the President and the suggestions of the Shipping Board, we are all in a fair way to get a pretty thorough education for landsmen in the art of ocean transportation.

What is Foreign Commerce?

SUPPLYING SHIPS with the stores they need is not foreign commerce, even when the ships fly a foreign flag. That is the effect of a refusal announced by the Supreme Court on March 6 to consider a case in the lower federal court, where the Federal Trade Commission and a ship-chandler had a contest as to the Commission's right to prevent the giving of commissions to ship's officers for business. The Commission said such commissions constituted unfair methods of competition, being in effect forms of commercial bribery. The ship-chandler retorted that the custom of giving commissions was of long standing and, anyhow, the Commission had no jurisdiction.

The federal court agreed with the ship-chandler. It declared that when the supplies were delivered on board ship, and payment had been made, the transaction was ended, and there was no foreign commerce about it. By refusing to review the case, the Supreme Court would seem to have been of the same mind.

Only a few days before, in the so-called steel case, the local court of the District of Columbia had decided the Commission had no right to require various steel companies to report to it upon their product, costs, etc., because interstate commerce was not involved. As this case may be appealed eventually to the Supreme Court, the point of view obviously taken by the Supreme Court about the ship-chandler's business being out of the commission's reach may have some significance.

A Committee Justifies Its Name

AN ECONOMY COMMITTEE can economize. Any person possessing doubts on this point can get reassurance from the accomplishments of a committee which has been studying the possibilities in the British Government. Its recent report would lop off over $300,000,000 from the expenditures of the present year over and above the savings to be made through the naval holiday provided by the Washington conference.

Some reorganization, too, is proposed by the committee. In its judgment, the three fighting services of army, navy and air should be consolidated in a Ministry of Defense, the Department of Overseas Trade should be sent to the Board of Trade, which corresponds to our Department of Commerce, and plans for afforestation should be discontinued.

Respite for Haphazard Sizes

SCREW THREADS are demonstrating their importance to Congress. Their standardization on bolts, nuts, and the other multitudinous things on which they occur in modern industrial equipment was entrusted by Congress in 1918 to a commission of officials and engineers. The task proved too big for accomplishment in the period originally set, and Congress is now advancing the date for the final report to 1927.

A Notable Decision

ADEQUATE RAILWAY SERVICE for the people of the United States is the purpose of the Transportation Act of 1920, as it was interpreted by the United States Supreme Court on February 27.

In earlier legislation Congress had given the Interstate Commerce Commission authority to prevent injustice through use by the railroads of rates that were unreasonable or discriminatory as to a shipper or a locality. The law of 1920, however, went much further. It gave the commission an affirmative duty to fix rates and take other important steps to maintain an adequate railway service. This was a new departure, and the most important feature of the legislation of 1920. Under the earlier legislation, which culminated in 1910, the Supreme Court says, "Whatever the causes, the fact was that the carrying capacity of the railroads did not thereafter develop proportionately with the growth of the country." It was to overcome this condition of things that the new departure was made. The purpose of Congress, the court declares, is obviously "to make the system adequate to the needs of the country by securing for it a reasonable compensatory return for all the work it does."

The question before the Supreme Court was whether or not Congress could deal with the railroads as a whole. It was contended by state commissions that the jurisdiction of the states over intrastate rates could not be disturbed. Wisconsin has a



statute, for example, prescribing two cents a mile as the maximum for passenger fares. Between the State of New York and a railroad there is an outstanding contract under which the road may not charge over two cents a mile. When the Interstate Commerce Commission, acting in accordance with powers it understood it received through the law of 1920, prescribed a rate that was about 3.6 cents a mile, judicial proceedings were started to test the law and its interpretation.

The decision handed down at the end of February sustains the commission in its understanding of the law. The income from intrastate rates must play a most important part, the court declares, in maintaining an adequate national railway system. Twenty per cent of freight receipts and half the income from passenger fares are connected with intrastate business. By giving the commission directions to prevent discriminations against interstate commerce, Congress had intended that intrastate rates should not be on so low a basis as to bear less than their fair share of the burden of maintaining adequate railroad facilities—facilities which are used indistinguishably for interstate and intrastate commerce and are conducted by the same persons. "Commerce is a unit," the court says, "and does not regard state lines. . . . When interstate and intrastate commerce are so mingled together that the supreme authority, the nation, cannot exercise complete and effective control over interstate commerce without incidental regulation of intrastate commerce, such incidental regulation is not an invasion of state authority." As the law stands, therefore, the commission may require that intrastate rates bear their proper share in providing revenues sufficient to maintain adequate railway facilities for the whole country and for both interstate and intrastate traffic.

Wisconsin's two-cent law and New York's two-cent contract both have to give way when the Interstate Commerce Commission finds that it takes higher rates to make the proper contribution toward maintenance of railroad facilities. No state is to get its transportation at the cost of somebody else. The Congress, the commission, and the Supreme Court would seem to be of one mind on that proposition.

Unsaturated Markets

SPEAKING of saturated markets—which nobody was—the makers of motor vehicles are taking heart from the 1921 figures. The federal Bureau of Public Roads says that there were 10,325,000 motor vehicles registered in the United States in 1921, an increase of 12 per cent over 1920 and nearly one to every ten of the population. Is that a saturated market or should there be one to every five—or two?

And compare the publishing trade. *The Publishers' Weekly* tells us that all the books in all the public libraries in the country do not amount to one book for each man, woman and child, and that the American presses do not turn out, including Bibles, a book a year for each man, woman and child.

Edison a Doubting Thomas

THOMAS A. EDISON at first concurred heartily in Henry Ford's suggestion that currency be issued against "energy units" at Muscle Shoals. Perhaps the very novelty of the proposal aroused the inventor's imagination. But it is a characteristic of that kind of intellect that it applies to what it finds the acid test of reason; and so as time passes Mr. Edison grows cold to the Ford device. He has sent a questionnaire to fourteen bankers about fiat currency, and he admits that the question is "very complex." Perhaps he has recalled something about this country's experience with Greenbackism. Perhaps he has thought something about the Mississippi Bubble, or about France's woes when currency was issued in the form of assignats against ample covering in real estate. Perhaps he is beginning to realize that no medium of exchange, not convertible on demand into gold, can ever maintain its parity.

Or perhaps he recalled Daniel Webster's words: "Of all the contrivances for cheating the laboring classes of mankind, none has been more effective than that which deludes them with paper money."

The Penalties of Rapid Cures

APPRECIATION of a currency causes problems quite as much as depreciation. Czechoslovakia is becoming aware of this. A year ago one American dollar would buy 100 of its crowns. Today the dollar will buy about 50. The consequence is that buying for export from Czechoslovakia is not as brisk as manufacturers had expected, goods are accumulating on their hands, and they cannot reduce the cost of their production to keep pace with the change in the value of their currency.

Appreciation in a country's currency is very desirable, but sudden changes throw the whole machinery of production for export out of gear. Appreciation is in fact like most cures for serious maladies—so vigorous and drastic as to be decidedly unpleasant. It is a cure, though, and assurance can be given that any generation which goes through the pleasant allurements of depreciation and undergoes the pains of appreciation will for the rest of its career stick to the very middle of the straight and narrow way of national finance.

Completing Our Merchant Fleet

SHIP CONSTRUCTION under the program undertaken by the Shipping Board during the war will reach its conclusion at the end of April, according to a statement of the Emergency Fleet Corporation. The last vessel on the program, built for passengers and freight, will then have been completed and been turned over to an operating company for use between the United States and South America.

Bug Powder Industry, Please Note

ACCORDING to the *Weekly News Bulletin* of the American Chamber of Commerce in Mexico, President Obregon has issued a decree exempting from export duties "insects of commercial value." The *Bulletin* adds "The above decree has been issued, it is said, for the purpose of protecting small industrial concerns and to stimulate producers of those articles to seek a market in foreign countries where many of those things will be easily sold."

In some of Kenneth Roberts' recent articles we have been reading about the trained cockroaches which furnished the material for betting in the capitals of the Balkan States, where they perform on duly equipped race tracks. The trained flea is a seasoned performer. It may be that this decree of President Obregon relates to the cochineal insect, but on the other hand the Mexicans may have been grooming some other bugs for economic penetration.

A French scientist is quoted in the daily press as saying that only dogs with fleas are truly happy. Can it be that a secret syndicate is being formed for the export from Mexico of fleas for discontented American dogs?

Meeting New Conditions

WHO shall say that the American business man is not adaptable? We note an advertisement of totem poles for Alaskan Indians made of marble by a Vermont Company in its San Francisco shops.

A Midwinter Ice Cream Boom

By WARREN BISHOP

MARKETING a new ice cream product in the winter of a year of great depression. It can't be done!"

It can be done and it was done. Once more there is proof that the buying power of the public isn't dead. It has been atrophy of selling power that has struck business.

The man who did it has built himself up a daily income in excess of $15,000—according to such of his acquaintances as take delight in multiplication, and forgetting, momentarily, the costs of sales—in less than four months, and he's done it out of dimes by original methods and by moving right against the prophets of evil and the men who said "it can't be done," and "the times aren't right for any new venture."

The man is Russell Stover, and the product he has started the nation to using is a chocolate-coated ice cream bar. Three or four thousand ice cream and candy salesmen would probably have told you, if they'd been consulted in advance, that the idea was not worth much, that it couldn't be marketed.

But Stover thought differently and went ahead. By the first of February, after only about three months of drive, so many manufacturers had been licensed that the American public was eating some 4,000,000 chocolate-coated ice cream bars a day and paying Mr. Stover 5 cents for every dozen sold.

You might have told Mr. Stover that ice cream was a seasonal industry, that it couldn't be marketed in quantities in midwinter, but he wouldn't have listened.

He had an idea and a name for it. The idea was simple and the name was fetching. "Eskimo Pie!" It's written up all over the United States now, on newspaper and magazine pages, on billboards and on shop windows. Yet how long ago was it that you first heard of it? Hardly a dozen weeks. The Stover idea was that the children, the women, and the men of the country would be made to buy a luxury product that should be sold *as a luxury*, for a fair price. Moreover, the market was as broad as the population and there was no end to the repeat orders.

The idea of a coated ice cream isn't new, nor is the idea of covering ice cream with chocolate. Hot chocolate sauce on ice cream is a familiar dessert. But Stover found a man who could prepare a coated ice cream in a practicable, sanitary, salable way. Methods of preparation and the name were protected by patent and copyright, and a very few trial sales showed a waiting public appetite for ice cream robed in chocolate and protected by a wrapper of tin foil.

Here's a description first hand of how it was done, given by an advertising man who was hastily summoned to Chicago by Stover soon after he really got to work:

I found him in a dramatic state of siege. He retired from one hotel bedroom into another, strategically seeking inner and yet further inmost sanctums for a calm that could not come. He had started the Eskimos marching across the country, preceded by dozens of salesmen and demonstrators and hundreds of letters and telegrams, and the grand headquarters of the invading forces found difficulty in keeping contact with the front lines. But so many messengers did come in to salute and report that finally Stover had to stop retreating into corner bedrooms, and sleep with his clothes on, on a couch, and do business between winks.

He had started in a small way. But he sold his idea so cleverly and thoroughly to the first few licensees that their competitors and even their distant fellow-manufacturers began to want to talk to Mr. Stover. The public liked the Pie—instantaneously sometimes, and with gradual enthusiasm elsewhere. But the mere audacity of offering ice cream done up in a tinfoil wrapper, to be handed out over a counter in a heated room, made the public taste once. And if the ice cream bar was good, it tasted twice and is still tasting.

His small-way start soon became literally a national progress. With typical audacity he put so many salesmen into the field that, during some of those siege days in the hotel, he really didn't know how many he had. Right behind them he immediately marshaled a national advertising campaign. He did the daring, persistent, aggressive thing so thoroughly that the Eskimo Pies never stopped even once to bivouac, but marched clear on from coast to coast. And now two or three million persons every day are buying ice cream, done up purely in a luxury form, at a luxury price, in the middle of the winter!

It isn't only Russell Stover who has profited by his defiance of precedent in selling ice cream in a winter when "nobody would buy anything."

Take *The Ice Cream Trade Journal*, the February number, and see how Eskimo Pie spreads and ramifies through industry. The advertising pages will give us a proof. There are some seventeen and a half pages of advertising referring directly to Eskimo Pies, one page of Stover's own advertising, and the rest divided among manufacturers of chocolate, refrigerators, tin foil, machinery for making Eskimo Pies and truck bodies for transporting them.

Ice cream plants make profits in August and run into deficits in January, usually. Eskimo Pie has put many ice cream plants even with the world in winter, in the last three months. Results? The members of the Association of Ice Cream Supply Men who sell them their essential ingredients, equipment and supplies under one of the strictest codes of ethics in force today in any industry, are finding fewer accounts still open on their books of last fall's purchases. And the ice cream manufacturer buys 150 varieties of equipment and ingredient for his plant.

Cocoa and chocolate manufacturers recently found themselves—their export markets dead—faced with prices below those of the pre-war days and with great stocks of raw and manufactured product and no outlet visible. Today the licensees of Eskimo Pie's manufacture are buying chocolate coatings in carload, five-figure lots. And chocolate manufacturers are paying bills.

When the war ended there was a glut of tinfoil in the hands of manufacturers here. They thought, and thought, and thought some more, but there were, after all, just so many markets for their goods. Now tin-foil houses are rushed with orders for Eskimo Pie covering.

Again—the Impossible!

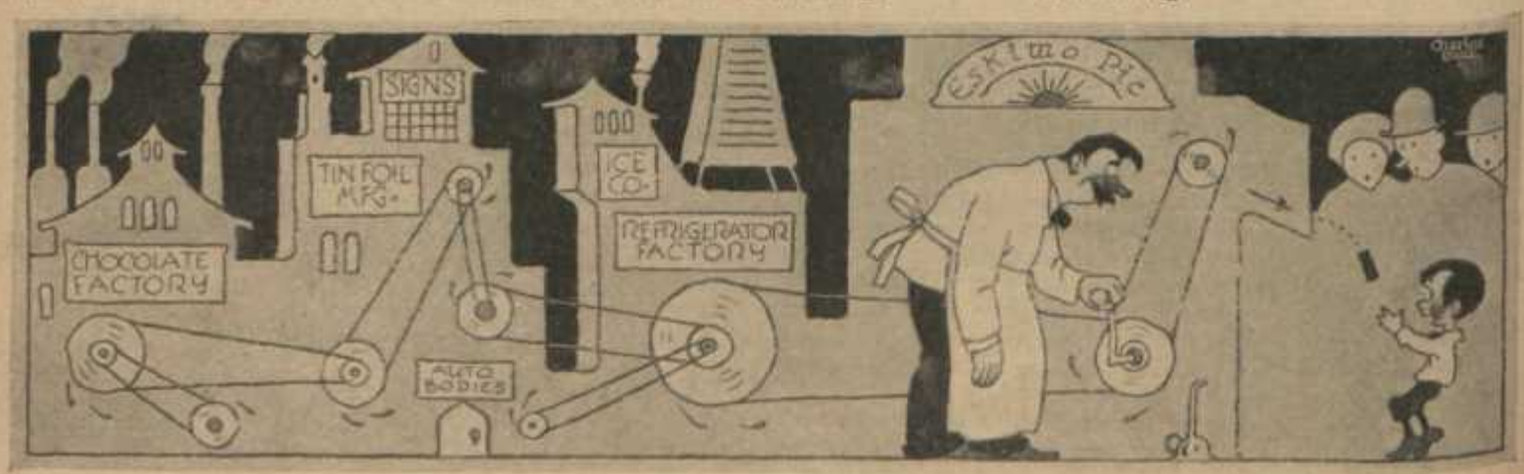
"THAT man could sell ice cream freezers to the Eskimos."

In commercial circles this phrase has stood for years as the highest compliment that could be paid a salesman.

Along comes a man, the father of "Eskimo Pie," who has achieved a selling feat apparently just as difficult as the above. They said it couldn't be done, but he went ahead, and in the dullest month of a dull winter he put across a campaign that made people buy ice cream at a luxury price!

Here is something of how he did it and how the boom reverberated through the kindred industries.

THE EDITOR





ROME C. STEPHENSON

PRESIDENT, ST. JOSEPH LOAN AND TRUST COMPANY, SOUTH BEND, IND.
FORMER PRESIDENT, SAVINGS BANK SECTION OF THE AMERICAN BANKERS' ASSOCIATION

The progressive and prudent business and banking thought of America has endorsed the idea of a complete audit of the commercial borrower's books at regular intervals by a reliable and disinterested certified public accountant.

The Reserve City Bankers' Association, recognizing the importance of the complete audit, has gone on record in commending it as an essential practice in the regulation of sound business.

The complete audit offers a two-fold advantage. It provides the business man with definite facts and figures concerning his affairs and it removes the temptation to appraise conditions with undue optimism. At the same time the complete audit strengthens the banker's judgment in determining the actual condition of the borrower's business, and thus contributes in a substantial way to the development of exact information upon which all prosperous business is founded.

Rome C Stephenson

Published in the interest of better Business
BY ERNST & ERNST

Those Difficult War Debts

By JOHN ROSS DELAFIELD

THIS COUNTRY produces, and has long produced, more than it consumes. We do not buy and consume all our own products. We cannot be prosperous supplying the home market alone. We must sell abroad too. Our prosperity, then, depends upon the maintaining of our foreign trade at its maximum. But what, it may be asked, have our war credits to do with our foreign trade? How does the fact that we loaned our allies during the war about $10,000,000,000 affect our prosperity? Why should it not increase it?—for such loans to countries of so high credit are surely an excellent investment, and the interest and principal are safe; and, furthermore, they have the capital for their own uses. But let us look deeper to see whether this is so and all there is to it.

To be sure, they got the principal of our loans to them, but did they invest it in anything that will earn the interest they have to pay us? Is it like a mortgage on improved property, with the rents coming in to pay the interest? No; they used the money for munitions and supplies of war that were all consumed and have passed off, as it were, in smoke, leaving nothing to earn our interest. It is not even as good as a loan on unimproved land, for there the land may be sold to pay the debt, while here there is nothing.

But what of that? The moneys borrowed by nations from their own people and foreign investors are usually also expended on things that bring no cash return, and did they not pay the money to their own people? And though these did not produce anything for it that added to their own country's wealth, and though the equivalent labor was lost to them, yet their people have the money and their credit is good. But even this is not the case, for the money they borrowed here they spent here for the purchase of munitions and supplies. So, our own people, not theirs, got the money. These countries, then, have each added this burden of debt without increasing their resources or wealth and their power to pay; yet they are among the strongest of all nations and will no doubt pay in the end, so why are we concerned?

Is there not, however, still another phase of the matter to be considered? These are the very people we want to have buy our surplus production, and, of course, they must pay us well and promptly, or we cannot keep our industries going to their greatest capacity. Before the war they bought our surplus production. In 1913, the year before the World War, and the last year during which trade was on a normal peace-time basis, we sold to Great Britain, France, Italy and Belgium together, $887,647,436 of product. They shipped us $507,669,550 worth of their own products in part payment, and paid the rest, about $380,000,000, in exchange or cash.

But can they go on doing this now, and what effect do our war loans have? The essence of exchange in its simplest form is that the man who owes money to an American exporter pays him by finding someone in his own land to whom an American in America owes money. From his fellow-countrymen he buys the credit and sends it to his creditor in America, who collects from the other American.

Payments by this method can only go on so long as Americans owe money to the people of the lands to which they export their American products. So long as there are plenty such debts, exchange is readily obtained, payments are easily made and there is no financial hindrance to trade, but so soon as such credits become diminished the law of supply and demand operates, and the foreign debtor finds he must pay a premium to get exchange, for there are more debtors trying to buy than there are credits to sell. The effect is that exchange rises, the premium is added to the cost of the goods, and these foreigners pay more to buy from us than they would from some other country—Germany, for example, where the exchange is not against them. The consequence is that we lose our foreign customers, who buy elsewhere. Everything, therefore, that makes an unusually great demand for credits to send to America tends to raise the exchange and to decrease our foreign trade.

Our war loans to these four countries aggregate $9,093,396,912, on which the annual interest at 5 per cent is $454,665,345. This, added to the $380,000,000 yearly balance from normal trade to be paid us in cash or exchange, makes $834,665,345, without including instalments on account of principal or past interest. It takes only a few words and figures to state these facts, yet the amounts and the magnitude of the transaction involved are so vast as to be almost beyond conception. These four countries will, if we require it, have to pay us every year, not only for the eight or nine hundred millions of goods they buy from us, but also $454,665,000 of interest for which they get nothing in return. Against this vast total of $1,342,312,780 they will sell us only $500,000,000 to $600,000,000 worth of goods. How will they be able to pay this immense balance; and where will they find the exchange?

Take one nation as an example: We have loaned France $2,950,762,938, at, say, 5 per cent interest, as a war loan. That will make $147,538,150 in interest for the French Government to pay us every year, and to this will no doubt be added payments on account of the principal of the debt. Our foreign exports to France in 1913, before the war, amounted to $153,922,526. Most of this was paid for by exporting goods to us to the extent of $138,933,833, and using the credits thus created in favor of the French as a basis of exchange with which to pay for the product bought from us.

In addition, there were credits created by the French holding American securities as investments, on which the interest was due them from America, and also credits created by Americans abroad traveling or on business. But now there is to be introduced into the market for exchange a new factor. Suddenly the French Government will want $147,538,150 of exchange every year to pay its interest to America on its war loans. So France will then have to pay us more than twice as much as she did in 1913. As a consequence exchange will rise and hinder our export trade to France. This condition will be the more aggravated because the French sold their American investments during the war, and that source for credits has gone, and can hardly be replaced by the sale of depreciated French currency to Americans who may wish to speculate in it. But cannot the exchange rate be kept down by shipping gold and silver instead? Unfortunately, there is not enough gold and silver to be had to make it possible for France to continue shipments of gold and silver to the extent of $162,526,800 a year. In fact, the people of France and other countries have already resorted to such shipments to so large an extent that there is an immense proportion of the world's gold already here in this country.

But, it may be asked, do not these facts apply also to the loans our allies made from our people through selling us their bonds? It is true, they do apply, but there is this difference—the loans made from our people by selling them bonds of the foreign nations cannot be cancelled without destroying the property and investment of the individual bondholders, but the loans made by our nation to our allies may be cancelled without the destruction or forfeiture of the property of individuals, and, as here shown, the benefits to our people from cancellation will far more than offset the loss to the nation at large.

But there is still another very serious economic factor involved which has already

Is Cancellation the Answer?

HOW can Europe's debts to us hurt our prosperity? Isn't it a good thing to have money owing to us? This article answers the question from the viewpoint of a man who believes the interallied debts should be canceled. As it passed from hand to hand in the offices of this magazine the comment everywhere was the same: "The clearest, most lucid, most cogent discussion of the subject that has ever come into our hands!"

Colonel Delafield is the head of the New York law firm of Delafield, Thorne and Burleigh, but he has given much of his time and attention to economic problems, and especially to international finance, in connection with his military duties. In September, 1918, he took charge of one of the largest finance offices of the United States Army, and he also took a leading part in drawing up plans and procedure for and in carrying out the settlement of claims against the War Department. He reorganized the Board of Contract Adjustment of the War Department, which, under his chairmanship, completed its work. For this the Distinguished Service Medal was awarded to him.

The reader should bear in mind that the views here expressed are those of Colonel Delafield, and that they do not necessarily define the attitude of The NATION'S BUSINESS.

THE EDITOR



BUILDING ON A BUSINESS BASIS

WE have spent over a quarter of a century in perfecting an organization competent to assume one contract for a complete building, with a guaranteed cost for the entire undertaking, including both architectural services and building construction.

Our object has been to produce the value per dollar expended which a business man is entitled to expect, and at the same time protect him from the unexpected costs, delays and other disappointments he rightfully feels should not be a part of a building operation. The experience gained from this endeavor has influenced us to increase the scope of our services until today we have in our own offices and on our own payroll:—

An architectural division which prepares all architectural designs and working drawings;
A purchasing division with a knowledge of national markets and ample credit;
A construction division which carries through each job from start to finish.

We are seeking opportunities to serve those who are interested in bank buildings, office buildings and other high-grade commercial structures. In addition to offering a proficient organization which co-ordinates smoothly in its various functions, we operate under the common-sense policy that what is good for our clients is also good for us.



For those who plan to build—

We offer a preliminary service which without requiring the expense of working drawings and specifications, develops accurate and reliable information as to the investment features and final cost of a proposed building. A letter inviting further particulars will be welcome and will place you under no obligation.

HOGGSON BROTHERS

NEW YORK CHICAGO

COMMERCIAL BUILDINGS DESIGNED AND CONSTRUCTED

begun to harm and will harm us much more in the future unless the situation is changed. It is said that France intends to use the reparations payments from Germany as a means to get money with which to make payment of her obligations to the United States, and that it is for this reason that France required the reparations to be paid her in money, rather than in labor and goods.

Let us consider how this works out—whether for our good or our harm. The reparations payments amount to about $2,400,000,000 a year. This amount the Germans must raise every year. It is sixteen times as great as the interest the French owe us on their war loans. But here the Germans have the same problem to meet as the French have, with their interest payments, except that it is on an immensely greater scale. They must buy exchange to an extent hitherto unheard of, and they have only one effective way to create the credits in their favor, and that is by themselves exporting as much as they possibly can and buying as little as possible in return, so as to use all they can of their credits to pay on the reparations. Such credits as they can create by selling their depreciated marks to people of the allied countries who may desire to speculate in them will be but a small help, almost negligible, in the face of such an immense sum.

The whole export trade of Germany in 1913 was $2,403,142,000, and against this they had imports of $2,563,185,000. But now they must create a surplus of exports over imports of $2,400,000,000 annually. The combined exports of the United States, England, Belgium, Italy and France in 1913 were about $8,670,000,000. Now the Germans must double their own exports of 1913 to get the money for the reparations payments, and, unless the demands of the world have increased that much, they must displace the trade of other countries to this vast amount, an amount a little less than one-third of the total export trade of the principal allied countries, and this displacement of trade will be largely a loss to these allies, whose trade will be thus greatly affected.

In other words, in order to pay her reparations in money or exchange, Germany must capture this great share of the world's trade—so vastly greater than the trade she ever had before the war. Assume that she does it successfully, then has she not accomplished an economic supremacy that it will be hard to overturn? Her goods will then have an established market the world over, such as they never had before. Her industries will continue their vast and economical production on a scale no other nation can rival, and she will soon become a nation of very great wealth and power, perhaps greater than ever before.

Are we willing deliberately to contribute to this result and to raise this great rival to our trade? Do our debtor nations look to the German reparations for the means to pay their war debts to us? If they do, we should think and act quickly to alter the situation.

How Else Can She Pay?

BUT is this result not inevitable, no matter what we do? How else can Germany pay in any event, even if France, England and Belgium do not need money to pay their debts to us? No; she has other means with which to pay; she can pay by sending her labor to work and produce in the industries of her creditor countries, wherever such labor will not displace that of the native people. Her men can rebuild the shattered villages and restore the devastated fields. She can send her goods direct to the creditor countries, to be sold by them, either at home or abroad, under such marks and in such ways as will not interfere with their own industries, export trade and commerce. By these and like means France, Belgium, Great Britain and Italy can receive the reparations without sacrificing the trade of the world to Germany; indeed, they can use the German goods as a means to build up their own foreign trade. They can have such goods made according to their own specifications and designs and marked as they may desire, and they can sell them abroad in such a way as to make a market for themselves and build that market up so that their own producers and people will in future have the benefit of it for their own manufactured products.

German labor may be employed in many ways in the allied territories and in their great undeveloped colonies that will serve to enrich those countries and will not compete with their own labor, nor interfere with the prosperity and wages of their own working people. With it, great projects of irrigation and port improvements, and other enterprises hitherto considered too vast to be yet undertaken, may be accomplished and the resultant great wealth realized.

Aside from these purely cold commercial considerations, there is the point of view of our own obligations in the war. Our allies strained every resource they had, whether of men, money or materials. They held the field and kept back our enemies for us until we, with deliberation, set about fighting for ourselves. Did we strain every resource ourselves? No; our expenditures, including our war loans, were about 11½ per cent of our wealth, while those of France were about 50 per cent. Because some of these expenditures of ours took the form of loans to those who were, or were to be, our allies, and who were fighting our battles for us, as well as for themselves, are we, therefore, going to demand their repayment?

Look behind the mere form. In form these were loans. In fact they were contributions of money to help in our own cause while we took time to prepare and to help ourselves. The circumstance that some of these loans were made before we ourselves declared war does not alter the situation. They were essentially the same, whether the payments were made before or after April 6, 1917. And our declaration of war only served to emphasize the real reason why these so-called loans were made. Were these loans at all? Let us consider them. In the first place, they were made only to those who were tacitly, and subsequently became openly, our allies. No such loans were made to Germany or to Austria. This is significant in itself.

Then how is it such loans are not made in time of peace? Evidently they were not banking transactions. We were not seeking an investment for surplus funds of the nation. Quite on the contrary; we were in need of money and we were imposing now taxation, hitherto unheard of both in character and amount, on our people. Nor were we seeking financial profit from these loans. The interest asked was but 5 per cent, and we did not press for payment even of this. No; these were not loans. They were in fact part of our war costs—contributions to our allies who were bearing the burden for us. The moneys loaned were spent here for war supplies and munitions; so it may more correctly be said that these were not loans at all.



Uncle Sam: "Wonder if that Dove of Peace has to be so darn militant."



This cut shows a crate properly designed to carry the same merchandise as the crate opposite. The boards leaning against the crate represent the saving made by proper construction. At the same time the three-way corner, and proper bracing, make it a much stronger crate.

A typical crate. More lumber than necessary used, as shown by the crate opposite; weak corner construction; ineffective bracing. The kind of crate that makes for delayed shipments, damage claims, poor collections, dissatisfied customers.



A $100,000,000 Annual Packing Loss—Most of It Saveable

HERE are two facts of significance to every shipper in the country.

That in twelve cities in a single month a freight inspection bureau was obliged to refuse or repair 43,738 packages received by carriers unfit for shipment.

And that, in spite of such rigid inspection, the railroads of the country in 1919 paid out $103,000,000 in claims on lost and damaged freight.

What is responsible for this condition?

THE PACKING of goods looks like a simple matter. Just two problems to meet:

1. *To build an economical crate of the right size.*
2. *To make it strong enough to stand the jolts and bumps of shipping and to protect the contents.*

Such an obvious thing that few shippers have questioned whether it was being done right—perhaps not knowing that proper crate construction is no longer a matter of guesswork but is based on definite engineering principles. The U.S. Forest Products Laboratory and other agencies have contributed much in this development.

The Weyerhaeuser organization has for years been at work on this problem—collecting and analyzing the facts, so that every foot of lumber it sells for crating purposes will deliver 100% service and at the same time effect the greatest saving for the shipper.

Weak Crate Corner Construction



The corner is the weakest part of the ordinary crate. This illustration shows a common method of crate corner construction in which the lumber is not used to maximum advantage. Nails driven into end grain have comparatively low holding power. This type of crate corner also lacks the bracing effect obtainable, with the same amount of lumber, nails and labor, in the approved "Three-way" corner illustrated below.

The racking and pulling apart of the ordinary crate corner is responsible for much of the damage to goods in shipment.

Strong Crate Corner Construction



This simple method of fastening together the corners of a crate requires no more lumber, is no more expensive to put together, yet is many times stronger than the method shown above.

In the better "Three-way" corner, each member is nailed to another member and has the third member nailed to it, making it very difficult to destroy the crate with ordinary handling. Note that all nails are driven into side grain. The distinguishing feature of this "Three-way" corner is that each member is held by nails or bolts in two directions. There are 16 ways to build this "Three-way" corner.

Make Every Month Perfect Package Month

AS A RESULT, this organization now offers to industrial executives a service that not only tells how to cut shipping costs and losses, but also includes the designing of crates to fit, in each case, the product to be packed.

Here is a service that has, in one instance, *saved a manufacturer 10% in his crating lumber costs, 5% in labor costs,* and 3% in freight costs; and through his ability to deliver his goods in uniformly better condition, speeded up his collections and increased his sales.

LUMBER is the standard material for shipping containers. For this purpose this organization offers to factory and industrial buyers, from its fifteen distributing points, ten different kinds of lumber, of uniform quality and in quantities adequate to any shipper's needs.

A booklet outlining the principles of crate construction and explaining the personal service of Weyerhaeuser engineers will be sent on request to manufacturers who use crating lumber.

Weyerhaeuser Forest Products are distributed through the established trade channels by the Weyerhaeuser Sales Company, Spokane, Washington, with branch offices at 208 S. La Salle St., Chicago; 1015 Lexington Bldg., Baltimore; and 4th and Roberts Sts., St. Paul; and with representatives throughout the country.

WEYERHAEUSER FOREST PRODUCTS
SAINT PAUL · MINNESOTA

Producers of Douglas Fir, Pacific Coast Hemlock, Washington Red Cedar and Cedar Shingles on the Pacific Coast; Idaho White Pine, Western Soft Pine, Red Fir and Larch in the Inland Empire; Northern White Pine and Norway Pine in the Lake States

but really contributions of arms, ammunition and war supplies.

There is, then, the strongest moral reason why we should not now seek to recover from our allies, who bore more heavily than we the burden of the war, what were, in fact, contributions to the common cause.

The problem is a grave one and of a character that requires courage and statesmanship to solve. It also gives an opportunity to effect a general readjustment which would add to the benefits that would flow to us from the forgiving of these claims against our allies. England, for example, is not only our debtor, but has also herself loaned large amounts, aggregating about £1,113,251,178, to France and our other allies. These loans may fairly be said to have been made in large measure from the moneys (amounting to $4,196,818,358) she received from us. As a condition for our cancellation of England's war debt to us, we might reasonably ask in return that she cancel her claims against France and our other allies. And we may with reason hope to accomplish this result, for England has already given some evidence of willingness to forgive these loans. Thus we might free France almost entirely from the need to require payment of the German reparations in money and exchange, and thus prevent Germany from flooding the world with her goods.

This should be a period of the greatest prosperity for us. Our industries were not harmed by the war. Our resources are almost unlimited. Our working population is just as great and just as capable as ever. Some of our chief competitors for foreign trade have temporarily largely withdrawn from that field in order to care for their own internal problems. Even our own allies are not giving their export trade the importance they did formerly. Now is our opportunity to have an industrial and a commercial prosperity such as we have never known before. But why do we not have it; why are our factories closed or working on part time only; why do our merchant steamers lie idle, gathered in great fleets in remote harbors?

What great wealth are we losing for our people by waiting thus idly while the opportunity lies before us and we do not grasp it? We may even delay until the time is past.

The reason is that exchange is so high that our foreign customers will buy no more products from us than they absolutely must have. The rate of exchange has destroyed our market abroad, and meanwhile, our great commercial rivals, especially Germany, with cheaper labor and unhindered by exchange, are stirring themselves and threaten to take the trade we cannot. It is for us, then, to do all we can to overcome this handicap, and certainly not to do anything to increase the disadvantage under which we labor. What is the amount of these foreign debts to us, repaid as they will be over a long series of years, beside our prosperity and the well-being of our people? Even the amount of these loans is but small compared with the great increase of wealth our country would create in a period of great economic prosperity.

When to these controlling economic and commercial reasons for canceling our claims for so-called war debts are added the plain reasons that these were essentially, in fact, contributions of munitions and supplies to our allies in a common cause, made for our own defense, and that they are small compared with the assistance our allies gave us in holding the enemy at bay, keeping them from our shores, and limiting their destruction of our property at sea; and trifling compared with the amount of loss in lives and property we would have suffered but for this assistance; there can be no doubt what we should do—not only our own present self-interest and future prosperity require that these loans should be canceled, but also a true understanding of their nature shows that we cannot justly, or with honor, ask our allies to reimburse them to us.

Congress in Its Lighter Moods

WHEN the Senate can crowd into half a column of the *Record* thoughts on business cycles, Herbert Hoover as a supplanter of Divine Providence, church attendance and the car which Henry Ford turns out so rapidly, those thoughts deserve added circulation.

The occasion was Senator Kenyon's bill intended to promote the building of public works in times of industrial depression. The bill had been described by Senator New (Indiana) as putting the Government "in competition with Mother Shipton, Hicks, the weather man, and other prognosticators of greater or less degree of success."

Mr. Norris of Nebraska is gravely concerned over the power entrusted to Mr. Hoover.

Clothed in nice language, but in common English, it seems to me that means—or those entrusted with the power will soon construe that it means—to say to the heads of departments: "Strain your eagle eyes out into the future, and tell us what is going to happen." The prophecy of Joseph in the days of Pharaoh would sink into insignificance compared with the prophecies which Hoover would give us in our own day.

Then they would get ready for it. Somebody will tell the President and the Congress and the governors and the mayors and all the people that next year we will probably have a panic which will wipe us off the face of the earth; that we are going to have a terrible depression. We know what that would mean. Banks would fail, and immediately we would all start to get our money out of the banks in order to avoid the panic which was to come the following year. I would rather postpone a panic until the time when God brings it than to have Hoover entrusted with this power, and get the panic a year sooner.

We had better let those things alone. If they are going to come every so often, as the Senator from Iowa says they will and always have, we had better let God run it as in the past, and not take the power away from Him and give it to Hoover.

MR. CARAWAY.—With the Senator's permission, I want to stand up for the Lord, if he is trying to saddle Hoover's acts on Him.

MR. NORRIS.—The Senator has my permission to stand up for the Lord. I will not object to that, and it might be good for the Senator if he would stand up for the Lord oftener.

MR. CARAWAY.—I presume the Senator is merely promulgating a theory, not something he has tried.

MR. NORRIS.—It is quite evident that the Senator from Arkansas has not tried it. If he had, he would have known that I was always there.

MR. CARAWAY.—Where?

MR. NORRIS.—At church, for instance, on the Sabbath Day, when the Senator was trying to get his flivver running and to pump up the tire he yesterday told us was exploded. If the Senator was anxious to stand up for the Lord as he would have us believe, he would not stop because his tire exploded or because his battery would not work, but he would do as I do, save the price of gasoline and street car fare and walk to the house of worship and serve the Lord.

MR. CARAWAY.—If I may be permitted to say it, I never saw the Senator in a church in my life.

MR. NORRIS.—I do not doubt it a particle, because the Senator does not go to church.

MR. CARAWAY.—I thought the Senator was a lawyer.

MR. NORRIS.—The Senator is mistaken about that.

MR. CARAWAY.—Well, an attorney.

MR. NORRIS.—No; I am making no claim; and even if I did make pretensions to belong to that class, the Senator should not rub it in by calling public attention to it.

MR. CARAWAY.—I presume the Senator could disprove it; but, at any rate, I understood he had a license to practice law. What I wanted to suggest was that he must know he should not decide a matter on hearsay evidence, and he not being at church, could not know whether I had been.

MR. NORRIS.—Mr. President, I have no doubt but that the Senator from Arkansas will stand up for the Lord, as he says. I hope he will, and if he is anxious to do that he must vote, it seems to me, against section 2.

I mean no disrespect to Mr. Hoover, but I think section 2 in a sense means that we are crowding the Lord off the throne and putting Hoover in His place. He is to tell us when the good times will come and when the bad times will come, so that we can get ready for the good and avoid the bad, and as sure as he is able to do all those things, and accomplish them with reasonable perfection, there will be no further use for anybody else in the way of government.

And the bill, amended to death, went back to committee.

REPRESENTATIVE MANN of Illinois throws a little tribute to the Postmaster General on the eve of his departure to be the superman of the movies:

MR. ROSSDALE of New York.—This change was suggested by the Postmaster General himself.

MR. MANN.—Oh, the Postmaster General has not been worth a 5-cent piece since he has been Postmaster General. He does not know anything about the Post Office Department; and, for one, I am mighty glad he is getting out of it. His only object has been to be extravagant in his own personal relation with the Government. Long-distance telephoning is his main, long suit. I am only speaking of his official duties.

And I can say this, having no postmaster to be appointed.

Let us follow this with another bouquet hurled from the Senate Chamber at a distinguished official. Senator Reed of Missouri is glorying in the fact that he voted against the bill creating the Budget Bureau. "And," he adds, "every day I live and hear about the Budget Bureau the more certain I am that I was right."

MR. REED.—Under the Budget system we go outside of Congress and appoint one man, whose chief title to fame is that he came down and cursed a committee of Congress, who is supposed to tell a committee of Congress how much money they should appropriate.



The Hill School at Pottstown, Pa.

An etching from a painting in oil by Frank Swift Chase

Among prominent schools served by Davey Tree Surgeons are:

NEWPORT NAVAL TRAINING STATION
PENNSYLVANIA MILITARY ACADEMY
THE MISSES MASTERS SCHOOL
EMMA WILLARD SCHOOL
NOTRE DAME OF MARYLAND
MERCERSBURG ACADEMY
BRYN MAWR COLLEGE
GROTON SCHOOL



JOHN DAVEY
Father of Tree Surgery

THERE IS ONLY ONE THING THAT CAN PRODUCE A FINE OLD TREE—AND THAT IS *TIME*

MONEY can buy almost anything else—gardens, houses, drives, shrubbery. But it cannot buy a full-grown tree, beautiful with that dignity and majesty which comes with age alone. A season can produce a velvety lawn; a century is often spanned in the creation of a tree.

Can you, then—if you are the possessor of fine old trees—afford to take chances with them? The tree is a living, breathing thing, and as such is subject to disease and decay. Insect enemies attack it. Structural weaknesses make it, often, the easy victim of storms. The ailing tree, if neglected, will die *prematurely* just as surely as night follows day.

Abundant foliage is not necessarily a sign of tree health. Disease and decay work insidiously, and frequently the most dangerous conditions are not evident to the untrained eye. Too often the warning comes too late—the tree is gone.

What is the real condition of your trees? To find out, come to Headquarters. Davey Tree Surgery is the development of a generation of experience in saving trees around thousands of America's finest homes. It is your guarantee of trustworthy service, because it is backed by an organization of established professional responsibility and financial stability. It treats trees as living organisms, and saves them without guessing or experiment—when they can be saved.

Davey Tree Surgeons are near you—if you live between Boston and Kansas City. They are easily available and handle operations of any size, large or small. *A letter or wire to Kent, Ohio, will bring our local representative promptly.*

THE DAVEY TREE EXPERT CO., Inc., 3704 Elm St., Kent, Ohio.
Branch offices with telephone connections: New York, Astor Trust Building, Fifth Ave. and 42d Street; Boston, 467 Massachusetts Trust Building; Philadelphia, Land Title Building; Baltimore, American Building; Detroit, General Motors Building; Chicago, Westminster Building; St. Louis, Central National Bank Building.
Permanent representatives available in districts surrounding Boston, Springfield, Lenox, Newport, Hartford, Stamford, Albany, Poughkeepsie, White Plains, Jamaica, L. I., Montclair, Philadelphia, Harrisburg, Baltimore, Washington, Richmond, Buffalo, Toronto, Pittsburgh, Cleveland, Detroit, Cincinnati, Louisville, Indianapolis, Chicago, Milwaukee, Minneapolis, St. Louis, Kansas City. Canadian address, 25*t* Langauchitere West, Montreal.

DAVEY TREE SURGEONS

Every real Davey Tree Surgeon is in the employ of The Davey Tree Expert Co., Inc., and the public is cautioned against those falsely representing themselves. An agreement made with the Davey Company and not with an individual is certain evidence of genuineness

Better Prices Encourage the Farmer, but He Has Had His Lesson and Is Still Buying Warily

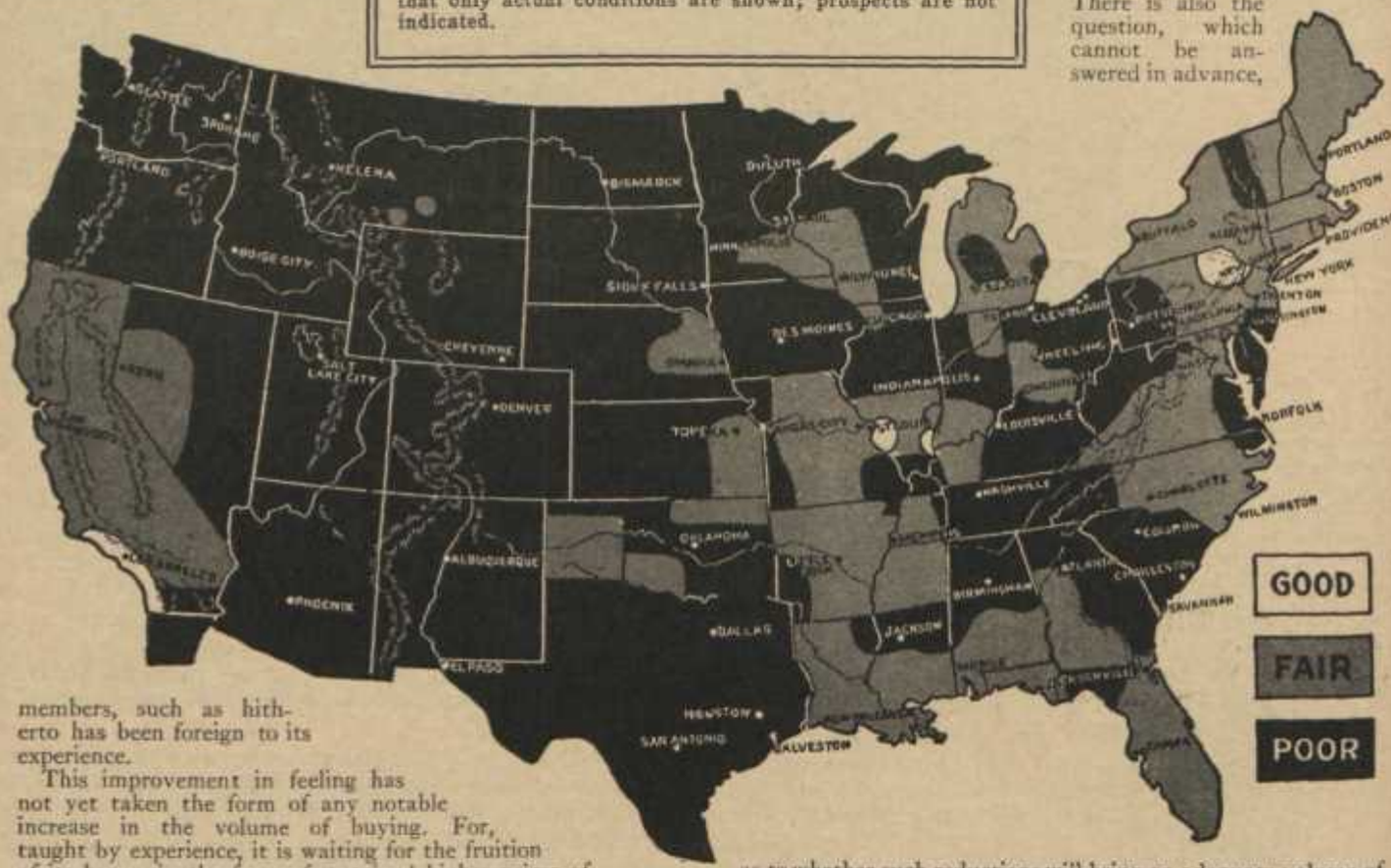
BY ARCHER WALL DOUGLAS

I FIND growing cheerfulness in agricultural sections due to advances in prices of farm commodities, and the general belief that higher prices have come to stay. The better part of this more cheerful frame of mind is the consciousness that the business of farming has reached the turning of a very long lane and that the future holds for the farmer the promise of a scientific and well administered business, equipped with the necessary plant, provided with needed funds, and with an abiding cooperative spirit among its members, such as hitherto has been foreign to its experience.

Business Conditions, March 15, 1922

THE DOUGLAS MAP shows at a glance the general conditions of the country. Light areas indicate good crops, industrial activity, and "high pressure" buying markets. In the black areas these conditions are lacking. The shaded areas are half way.

In studying the map it should always be borne in mind that only actual conditions are shown; prospects are not indicated.



This improvement in feeling has not yet taken the form of any notable increase in the volume of buying. For, taught by experience, it is waiting for the fruition of its hopes, in the form of sustained higher prices of its own commodities, and lower prices of the things it buys, before venturing very far out into the water. Also, it waits to see what the coming harvest has in prospect, and if things look well as spring opens up it is going to take a chance and do some purchasing on prospects. Until then buying will be for needs, and largely on price, even though merchandise stocks in the hands of dealers be light and assortments badly broken.

The latest official information is that wheat yields in Argentina and Australia are somewhat less than last year. These two countries and Canada will probably furnish most of the wheat imported by Europe until our coming harvest is on, since our exportable surplus is nearing its end.

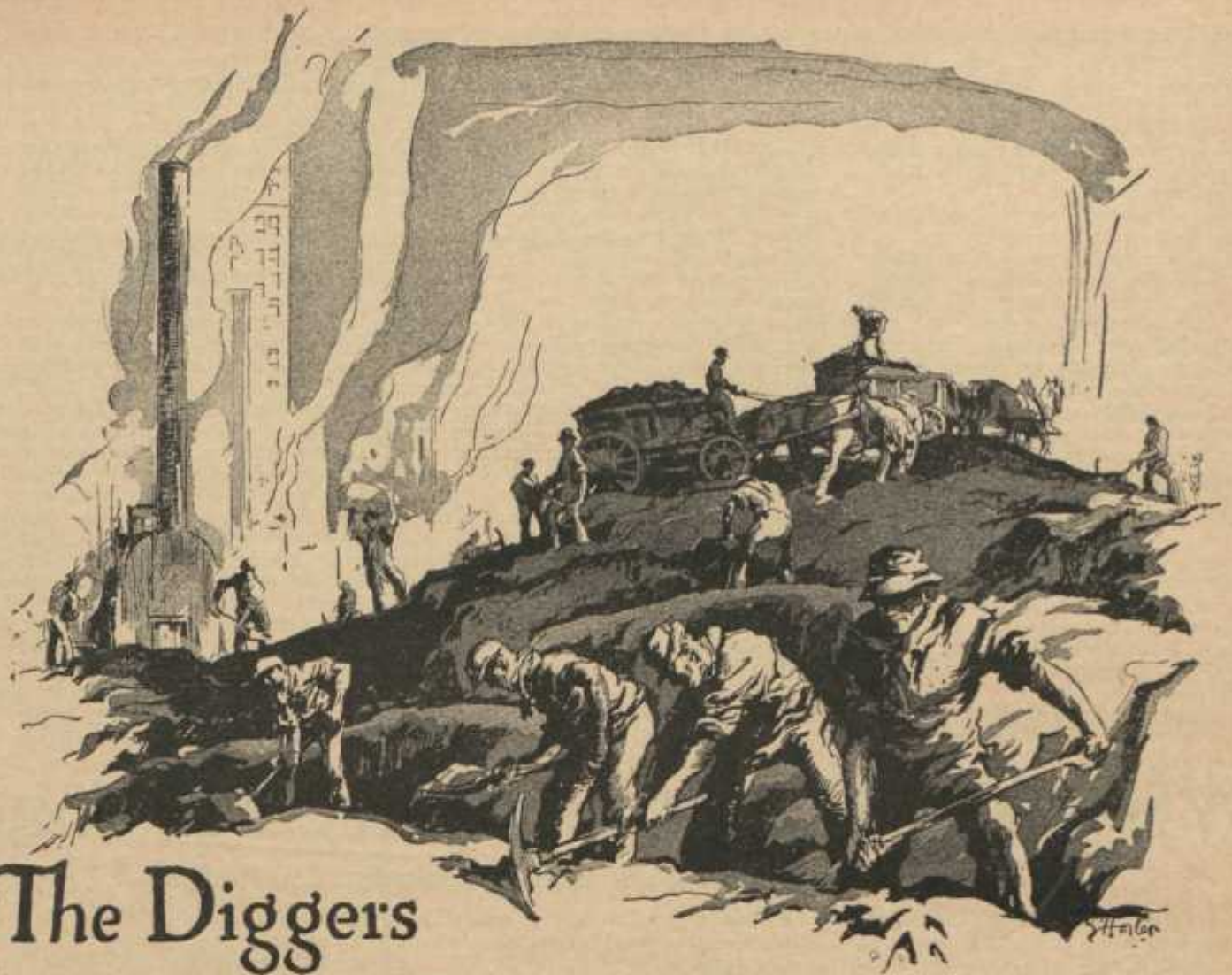
High prices for wheat seem likely to prevail for some time. Recent precipitation in the West and Southwest has been of much benefit to the growing crop, though it may take some further time to reveal the damage done by previous dry weather accompanied by wintry gales.

There is an insistent demand in agricultural sections for lower freight rates on farm commodities. It is a demand thoroughly conscious of the heavy handicap that present freight tariffs are on the sale of agricultural products, but that probably does not thoroughly realize that the railroads have troubles of their own and are not having an easy time solving them.

The railroads, like all other branches of business, are anxious for a volume of traffic that will keep down the present undue proportion of expense account. They feel, however, that such reduction in freight rates as is called for should be accompanied by a corresponding reduction in their expense account, and this they are striving to bring about with the handicap of not having the final say in such matters. There is also the question, which cannot be answered in advance, as to whether such reductions will bring an adequate volume of business, under present depressed conditions, to compensate for the reduction in rates. Like most of great economic problems it will probably all come out in the wash, though not so fast as we may desire. For much of it is dependent upon the action of certain government agencies, and no one can recall any government forces, in time of peace, hustling themselves to get things through in a hurry. For those are not the ways of red tape.

We have yet to learn from experience how far we can safely go, and no further, in the regulation of public utilities; but this much is obvious at present, that the impossibility of the railroads dealing direct with their employes on matters of the utmost mutual interest is a serious handicap on bringing about that spirit of loyalty without which there can be no efficient service.

One of the interesting features of the export trade in 1921 was the large amount of corn sent abroad, more, in fact, than in any twelve months in the past twenty years. Much of it went to Russia as food for the starving millions in that distressful country; but the rest of Europe apparently took it as feed for livestock, whose depleted numbers they are endeavoring to restore and for which there is no food like corn. Many years



The Diggers

FORTY stories in the air the man who rides the giant girder guides it into place, there is the drum of rivets driven home, and the hurrying crowd below pauses to watch the latest wonder of construction climb toward the sky.

In the frontier days the early settler built his simple cabin upon surface soil. But as men built upward in the air they dug downward in the earth. As industry and commerce demanded buildings of greater size, safety demanded foundations of greater depth.

And so, before the man who guides the girder comes the man who wields the shovel. Supporting the structure which is seen is the structure which is unseen. High above the city looms the graceful tower, for all to see, for all to admire; but anchored fast to bedrock is the strong foundation which supports the tower in its place.

National advertising, in its early days, was built upon surface soil. It was conducted without study of markets or market conditions; without assurance that the product possessed the elements of national success; without adequate trade distribution or organized sales tactics.

Because advertising was a novelty, the mere act of advertising was sometimes enough for success. But to go on that basis today is as dangerous as it would be to erect a modern building on the surface foundation of the settler's cabin.

With today's problems of distribution and competition, if advertising is to be successful the message that appears in the publications must be only part of the structure. Supporting this part which is seen must be the part which is unseen. Inviting and convincing must be the message, for all to see, for all to remember; but anchored fast to bedrock must be the strong foundation which makes the message effective.

And so, at Advertising Headquarters, before the building of the message comes the digging of the facts.

N. W. AYER & SON

ADVERTISING HEADQUARTERS

NEW YORK BOSTON PHILADELPHIA CLEVELAND CHICAGO



ago there was a sustained effort on the part of corn growers to teach Europeans that they were missing something when they did not eat corn in all its infinite varieties of food preparations. But it was no use. We led them to the trough, but they would not drink and went on eating rye bread and pretending that they liked it.

Europe has always drawn on us for food, and this situation is accentuated even more than in pre-war times because of the elimination of Russia for so long a period. We seem to forget in all these calculations of a rehabilitated Europe that such an event will work both ways. If it means larger purchases of our goods in some lines, it means an even fiercer competition in other lines and a consequent falling off in such exports. What we seem gradually drifting to, and this drift will become more apparent in a short time, is to find greater markets elsewhere, especially in South America and Asia, particularly for fabricated materials. It requires only a casual glance at export figures to note how our previous contact with Cuba, Hawaii, and the Philippines has proved an anchor cast to windward, just as England's strength in her export trade lies in the loyalty of her colonies, alike in war and peace. Evidently kissing goes by favor in more matters than just affection.

Few things give more vivid realization of the steady crop diversification going on in the South, and so little realized in most other sections of the country, than a recent official report of crop yields in Alabama for three years past. The matter of outstanding moment is the great increase in production in 1921 over the other two years of all manner of foodstuffs, grains, tubers, fruits, nuts, vegetables, accompanied by corresponding decrease in cotton, and concluding with the sad anti-climax of the money value to the farmer of the 1921 crop being about one half of that of 1919.

The story of canned goods, in fruits and vegetables, illustrates the course of what each line may expect according as it adjusts itself in accord with prevailing conditions. There were huge stocks carried over into 1921 which had to be disposed of at reduced figures. This stimulated consumption. Then there were smaller yields of both fruits and vegetables in 1921 than in the previous year. So stocks are now below normal for this season of the year. The consequent outlook is for larger production of more fruits and vegetables this year than last, as truck garden yields, in particular, vary greatly from year to year. There probably will be a large volume of business in these commodities during the coming months. Also in fruits, since the severe and widespread freezes we had last spring do not often occur two years in succession.

How vast is the volume of business in canned goods in vegetables may be gathered from the story of tomatoes, the "love apples" of our grandfathers, then merely a curiosity and negligible as an edible vegetable. Like most good things of strictly American origin, it finally made its way, and the annual commercial pack varies from 240,000,000 to 500,000,000 cans, exclusive of those put up by innumerable housewives.

As in canned goods, so in other lines; those who have liquidated and offer prices which both dealers and consumers feel are bottom for the time being, are doing business in fairly good volume.

Several industrial developments indicate how misleading generalizations may be under present conditions. Raw wool is up, apparently due to the Emergency Tariff, and with strong demand, while the business in manufactured woolen goods is not so satisfactory. On the other hand, in Australia recent sales of wool were on a declining market.

Demand continues slow in most metals. The little boomlet in copper died aborning and prices went off some, because of still too much surplus above ground, although it is steadily getting less, and there is likelihood of some increased activity in mining. Zinc had much the same fate as copper. Lead is mostly standing still. Iron and steel mills are still running on short time, though showing some slight increase in production in January. Prices weakened somewhat, more particularly in finished products.

Why We Can Compete Abroad

An Authorized Interview with Samuel Vauclain by John Burnam

SOON after Samuel M. Vauclain returned from his recent trip to Europe he took a turn one day through a plant of the Baldwin Locomotive Works. One of the employees, with that respectful familiarity which Baldwin workmen customarily manifest toward the president of the concern, accosted him with a query:

"How's business, Boss?"

"Well," said Mr. Vauclain, "whatever business there is, I'm going to try to get."

"That's right—and don't worry about the price, Boss. Whatever price you've got to make, we'll back you up."

That little story came to me, not from the president of the Baldwin concern, but from Richard Spillane, financial editor of the Philadelphia *Public Ledger;* and yet it was a story pertinent to a question I had put that morning to Mr. Vauclain himself.

"Is it possible," I had asked, "for American manufacturers, employing labor at high wages, to compete in Asia and South America and Africa with European manufacturers employing labor at low wages?"

Mr. Vauclain's answer was unequivocally affirmative. He did not base his optimism on wage deflation, whatever he may think about the need of that. He based it on the American manufacturer's superior equipment in labor-saving machinery. And his reply is a message of hope to every business man in this country.

"No country can compete with German manufacturers on a cash basis in Europe," said Mr. Vauclain. "Only those manufacturers can compete who can extend credit where it must be extended, for Germany cannot meet that demand. But in other countries I am confident that we can meet German competition even though a German mechanic can be hired for about fifty cents a day, while we pay ours more than that an hour. In fact, I saw abroad much to be careful about, much to bear in mind; but I saw nothing that the American manufacturer need be afraid of."

Mr. Vauclain's casual comparison of wages was a reminder of the figures presented to British manufacturers in session at Birmingham, wherein the estimate was made that an ounce of gold would buy 17.22 hours' work in the United States, while in Germany it would buy 201.66 hours' work. Could the ingenuity of the American inventor overcome such a handicap as this? Let one of America's ablest manufacturers and shrewdest traders give the answer:

"German labor is so cheap," said Mr. Vauclain, "that it has not been necessary to depart from the old methods. The German manufacturer studies the cost of labor-saving machinery a long while before he can bring himself to install it, because with him raw material is the chief element of cost; whereas in this country, where labor presents the most serious problem of cost, we have exerted great effort to reduce the amount of labor required in production.

"We use jigs and gauges and adjustable forms so as to do away with leveling and lining up and expert examinations. We hoist a boiler into the air with a huge bull and drive rivets into it while it is erect, for example; but in Germany I saw them doing this work with a portable riveter on a huge crane, while the boiler lay prone, so that sometimes it took ten minutes merely to get ready to drive the rivet. In this country we cannot afford to waste time at that rate.

"Such primitive methods of manufacture as this prevail even in a plant like the Krupps'; yet they do nice work, and their output is not to be belittled, because they do not employ what we regard as modern methods. Their reason for sticking to the old way is economic, and the thing is so simple that it should be apparent at once. In Europe, and especially in Germany, the manufacture of a locomotive requires many expert examinations and long processes; whereas in this country not only the locomotive but each part of it is so completely machinized that the output can be but one thing. That, in a word, is why we can compete with Germany in South American and Asiatic countries, where the cost of transportation to the consumer is about as great for us as for the German manufacturer, despite the ridiculously low wages paid to German workingmen when translated into dollars.

"The mark has a much higher value within Germany than without. That is to say, it has greater purchasing power within the country of issue than in other countries, in accordance with an established economic law. When the German manufacturer buys outside he feels the exchange rate severely, and he is not in a position to extend credit anywhere.

"The German workers are not fed like ours. They are not so well nourished. Their whole standard of living is lower, and perhaps it is for that reason that they lack initiative. The same men when brought to this country have been seen to acquire new interests and new activities.

"Perhaps there is something in the ozone here. Perhaps there is a difference in the way they live. Workmen who in Germany seemed mere automatons have manifested a marked change soon after coming to this country. They no longer regard certain prescribed evolutions as a day's work. They acquire initiative."

Mr. Vauclain said the factories in Germany were unusually busy and that in the Krupp plant many miscellaneous products were being manufactured. Locomotive plants were working full time and had orders to keep them busy for more than a

year to come. His last trip to Europe was not made to get new business, although he did enter into a competition against European manufacturers to send a small order of locomotives to a certain country outside Europe, which he did not care to name. He confesses that he is awaiting the outcome of this bid with special interest.—JOHN BURNAM.

Our Corporation Income

INCOME TAX RETURNS provide a mass of statistical information, out of which the Bureau of Internal Revenue has since 1916 been compiling an annual volume. The compilation from the returns filed in 1920, i.e., for 1919, has now appeared.

For 1916 the number of corporations filing returns was 341,000 and 39 per cent of them had no net income but "showed in the red." For 1917 the number had risen to 351,000, and the percentage which had deficits dropped to 33. War times would seem to test corporations in more ways than one; for 1918 there were 317,000 reporting and 36 per cent of this number had no net income. The data now at hand for 1919 show 320,000 corporations and 34 per cent with no net income.

The gross income of all corporations, both those making money and those losing it, in these years was:

1916	$35,327,000,000
1917	84,693,000,000
1918	86,463,000,000
1919	99,918,000,000

These figures are undoubtedly impressive, showing all the results of the various kinds of inflation that had been incident to war, but the percentage of deductions on account of expenses, etc., i.e., all the deductions to arrive at net income, are still more impressive. These percentages were:

	Per cent
1916	77
1917	88
1918	91
1919	92

Such percentages mean that net income, before taxes, was much more constant in figures than gross. For these years net income of corporations, with subtraction of deficits of corporations not having any net, was:

1916	$ 8,109,000,000
1917	10,101,000,000
1918	7,672,000,000
1919	8,416,000,000

The data given above for corporations alone will illustrate the possibilities, and at the same time indicate something about the trend of business and of returns from business operations.

Justice and Judicial Pay

JUDGES' SALARIES have not been very responsive to the course of the cost of living, but during 1921 nine states increased the compensation of the judges of their supreme courts. Pennsylvania is the most liberal, paying the judges of its highest court $3,000 more a year than the judges of the United States Supreme Court receive. If New York votes favorably next fall upon a constitutional amendment, the members of its highest court will be on an equality in compensation with the Pennsylvania judges.

Of course, judicial salaries in the United States do not compare with those paid in England, where the chief justice receives almost three times the salary paid to the Chief Justice of the United States Supreme Court.

TRUE

CONSERVATION

THE LARGEST HIGH-HEAD AND THE LARGEST LOW-HEAD HYDRO-ELECTRIC PLANTS IN THE WORLD BOTH DEVELOPED BY STONE & WEBSTER, INC. HAVE SAVED THE COUNTRY OVER EIGHT MILLION TONS OF COAL TO DATE

STONE & WEBSTER

INCORPORATED

CONSTRUCTION DIVISION

BOSTON, 147 Milk Street
CHICAGO, 38 S. Dearborn Street
SAN FRANCISCO, Holbrook Bldg.

NEW YORK, 120 Broadway
CLEVELAND, Leader News Bldg.
PITTSBURGH, Union Arcade

Cheer Up! It Has Been Worse

By H. M. RAILSBACK

Of Deere and Company, Moline, Ill.

IF the visit of that pestiferous guest, Hard Times, gets on your nerves these days—if you are beset by whispering glooms which tell you that the old duffer is acting worse this year than ever before and has made arrangements for a long stay, then try the following prescription. There is a real "smile-kick" in what it calls for.

Take the back trail of Hard Times, back around the intervening years of Good Times, to the early '90s of the last century.

Don't depend upon your memory to take you back, for memory is a poor preserver of the realities of a period nearly thirty years past.

Read newspapers, magazines and business literature then published, and from those records of humanity learn how Hard Times was acting and how business was reacting.

Imagine that you are living back in those times, doing business as a merchant or as a farmer. What is the trend of the news that you read, and what are you and your neighbors thinking and saying?

Take a glance at the foreign news first.

In Russia, famine and pestilence were causing widespread ruin in every department of commercial life.

Business bankruptcies and hard times were general in Germany.

A tremendous panic had paralyzed business in the Argentine.

In Australia, nearly every bank of any consequence had been obliged to shut its doors, and every commercial interest is involved with the banks in deepest distress.

"Greece has fallen into the abyss of insolvency; Italy still reels on the brink," said a dispatch from London.

Then turn from these pictures of business disasters in foreign countries to the conditions then existing in America.

Here, there was a pall of doubt, discouragement and bitterness. Writers in newspapers and magazines were lubricating their vocabularies with gallons of gloom and pouring forth articles that told the tribulations of the people and foretold greater disasters to come. The popular song was a wail that carried the refrain: "Hard Times, Hard Times, come again no more." Now and then you heard or read cheery comment, but the optimistic note was overwhelmed by groaning forebodings; much as, in the choir of the church we used to attend, the sweet treble of the girl who could sing was drowned out by the butcher's "bear-tone." And there are facts that seem to support the popular pessimism.

You read in a business review:

> Between January 1 and October 1 of the past year (1893), 585 banks suspended payment. Of these banks, the suspension of only 171 was temporary. During the same period, over one billion, two hundred million dollars' worth of railroad property of the country was placed in the hands of receivers. And in the same time there were 16,000 bankruptcies of business concerns with an aggregate loss of $460,000,000.

With factories everywhere closed down, caring for the unemployed was a national problem. Every large city had emergency organizations to relieve the destitute. Pictures and stories of the lines at municipal free soup kitchens were featured in the newspapers. "Coxey's army" was organizing for its march to Washington. Government figures for the year showed a tremendous decrease in the revenue from tobacco, and a leading newspaper pointed out that "When Lemuel Squiggs, who has chewed and smoked nigh on to fifty years, can't find a nickel to buy a sack of Old Hillside or a rectangle of Star, times are indeed hard."

Farmers especially were hard hit. Said another business review of that day:

> The large crops in 1891 in cotton and grain made our farmers feel rich. They knew of foreign shortages, and they didn't wait to see whether all their expectations of enormous exports at famine prices would be realized. They began to spend what they thought their raw materials would buy in the markets, and, inspired by the prospects, many of them were not satisfied with the first prices made on their crops. They held on, but they bought liberally of manufactured goods; they bought silk dresses for their wives, new pianos for their daughters, and in other ways they anticipated far too much.

So, bitter days came to the farmers. Instead of the big income which they expected from the sale of their crops and live-stock, they had nothing but big debts. They needed money, but they couldn't get it. There was no market whatever for their hogs. Corn wasn't considered worth hauling to town at the market price of fourteen cents a bushel. Eggs were selling at eight cents a dozen. With money disappearing from its usual channels and with banks going under, interest rates were rising. And even at the rising rates, the majority of the farmers were unable to borrow money that was direly needed to tide them over.

Those are examples of the conditions you find when you get back to 1893 and 1894. Looking at them from our vantage point in 1922, and knowing, as we do, the richness of the intervening years, we well may smile at the doubt and despair with which the people of that time faced their future. How could it have been possible, we wonder, that those bitter merchants and farmers of 1894 could not foresee the long period just ahead of them when the measure of prosperity and happiness and useful living was far greater than before the depression, and when they, themselves, could look back at the time which they had considered utterly disastrous and see it as only a hill in the road of progress!

Yet, that pessimism was due to a deep-seated trait of human nature. Regardless of the fact that no business conditions are permanent, a great many people, when times are booming, see no end of the boom, and likewise, when times are hard, they are blind to the signs of good times just ahead. Not until the bad times or good times have developed considerably, do they arouse themselves to the changed conditions—and for that they suffer, while the alert profit.

Here we are at the beginning of this new year of 1922. The painful paroxysms of 1920 are history. We have gone through the deflation, the liquidation, the depression, the readjustment and the rebuilding of 1921. General business bears a number of scars as the result of the transition, but new wounds of serious import are missing. We found at the end of the year that the prosperity of the country was astonishingly better than the early months promised. The total production of material wealth in 1921—the output of farms and factories—has been conservatively estimated at 38 billion dollars—50 per cent more than in 1914. Business in general at the end of the year was rated at 60 per cent of normal, and growing better every month.

We have more gold in our possession than we ever had before. Money is more plentiful. Commercial paper is now being discounted on a more normal basis. With money plentiful and with business convalescence at a point which conservative institutions consider safe, the nation's dollars are going to work.

The sky is rapidly clearing for the farmers. The man who has been producing milk, butter, eggs, fruit, potatoes—in short, the man who has practiced diversified farming—has hardly felt the depression. And the actual financial condition of the others is better now than it has been at any time since the autumn of 1920. They have liquidated much of their crops. They have paid many of their debts. Many thousands have been enabled to knock off their financial shackles and secure freedom for profitable future operations, through the credit relief given by the War Finance Corporation.

Domestic and foreign demand has brought about a great decrease in the surplus of farm produce. The world's supply of bread grains is now estimated at less than what the world will need before the next crop. Every one of the rapid strides that domestic business is now taking results in more buying in the cities; decreases the surplus of farm products and brings nearer a general equalization of supply and demand

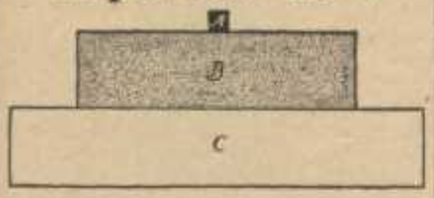
Yet We Got Over It

NEARLY six hundred banks in the United States suspended payment, and there were 16,000 commercial bankruptcies. Greece was in "the abyss of insolvency," and Italy was on the brink. In Russia, famine and pestilence prevailed, and in Australia nearly every bank of consequence had closed its doors. American farmers were so hard pressed that they could hardly find wherewith to buy smoking tobacco.

Such were the conditions in 1893, as revealed in newspapers and magazines of that time. Looking back on them, the period from which the world is now emerging seems not so gloomy, after all.

THE EDITOR

Plans are most important now



If you let "A" represent the cost of plans now and you can build for the cost represented by "B" at bottom costs, why pay as much as "C" for the same building on a rising market?

GOOD PLANS are the best investment a prospective building owner can make. They cost but little in comparison with the building itself but determine its whole character, appearance and usefulness. The preparation of good plans and specifications takes almost as much time as the erection of the building itself.

The wise business man plans extensions when business is dull, then with plans ready, buys at the bottom and rides up with the market.

THE H. K. FERGUSON CO.
Engineers -:- Builders

6523 Euclid Ave. CLEVELAND Phone: Randolph 6854
1937 Monadnock Blk. CHICAGO Phone: Harrison 1786
21 W. 43rd St. NEW YORK Phone: Murray Hill 3873

Ferguson
ONE OF AMERICA'S BEST BUILDERS

What's the Outlook for Auto Stocks?

The answer will be found in the first of a series of special analyses, covering every group of listed stocks, now running in

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"A Condensed Survey and Forecast of Business Everywhere."

A copy will be sent free of charge to business men, bankers and brokers requesting it on their *business stationery*.

STANDARD STATISTICS COMPANY, INC.

"The World's Largest Financial Publishing House."

47 West Street New York City

which will be reflected in profitable prices for farm products. Furthermore, the return of financial stability in foreign countries, quickened by the results achieved by the conference on disarmament, greatly improves the prospect for the American farmer.

Railroads have already put into effect a reduction of freight rates on farm crops and are readjusting their business for further reductions that will affect all commodities.

Those and other signs tell that Old Hard Times is losing his grip. His call is about over. He isn't prolonging his visit this time as he did in the early '90's, nor has he caused the general suffering that he did then. His coming found the people of this country perhaps worse prepared in spirit than in 1893, but far better prepared in a material way. This time he found a banking system that was panic-proof. This time there has been no nation-wide crash, no long period when, month after month, unbroken clouds of gloom and despair hung low over a business world apparently ruined. This time there have been sections of the country where the spell of Hard Times was quickly broken.

All over the country the process of "moving out" the effects of Hard Times has been going on for months. And while Hard Times has been moving out, Good Times has been moving in. There has been nothing spectacular about the change. It may not have been observed by many of those who have been mainly engaged in entertaining the glooms of Hard Times. It may still be news to the crowd of "wishers" who have been getting stiff-necked doing nothing but watching for the prosperity parade to come tooting around the corner. But the change *is* progressing. The period of Good Times —a long period, say the business forecasters —is beginning.

Don't make the mistake of thinking that Old H. Times is only looking for another package of hardships to open. He is looking for his hat. He will soon be a back number—just a memory. Now is the time to turn to Good Times, or, as the slogan of the South Dakota Implement Dealers' Association puts it, it's time to "smile and work."

Recent Federal Trade Decisions

A CASE of wide interest to manufacturers and dealers in toilet goods throughout the country is now before the Federal Trade Commission. The formal complaint charges two soap manufacturers with "false and misleading advertising."

The complaint alleges that the companies make soap labeled "Olive Bouquet" and "Olive Castile" which contain no olive oil; "Medicinal Toilet Soap" which contains no medicine; Peroxide Soap which contains no hydrogen peroxide; "Palm Coco" and "Palmo" with no palm oil; "Witchhazel" with no witch-hazel.

It is asserted in the complaint that the public has a widespread belief that soaps without animal fat are less injurious and that they are induced by misrepresentation to buy soaps marked as described.

Recent formal complaints served involve a number of oil companies which, it is charged, have deceived the public by misleading and fraudulent advertisements in selling their stock.

Of cases decided in the last month preceding this issue of The Nation's Business by far the larger number had to do with the "giving of gratuities." One case against a ship chandler is typical. There the com-

Once in Three Years

more likely five—a peculiar turn in market conditions offers a most remarkable opportunity for profit.

Such development has already begun!

Babson's REPORTS

Speculative Bulletin just off the press, gives you the plain unbiased facts on the situation and outlines the peculiar opportunity afforded by this sudden change.

REPORT ON REQUEST

This Bulletin and Booklet—"Getting the Most From Your Money"—is available for distribution to interested investors, gratis.

Tear out the Memo—now—and hand it to your secretary when you dictate the morning's mail.

Merely ask for Bulletin No. D41

Babson's Statistical Organization
Wellesley Hills, 82, Mass.
(Suburb of Boston)
The Largest Organization of Its Character in the World

MEMO
For Your Secretary

Write Roger W. Babson, president of Babson's Statistical Organization, Wellesley Hills, 82, Mass., as follows: Please send me Bulletin D41 and booklet, "Getting the Most from Your Money" —gratis.

Distribution of Overhead Is a Crime

Efforts to find cost by percentage on direct wages is a dangerous delusion. Stop it.

There is No Overhead

Modern conditions demand modern methods or failure threatens.

Send for the General Managers' Expense Analysis, Free

THE DENHAM COSTFINDING CO.
COST ENGINEERING SERVICE
407N Sloan Building
Cleveland, Ohio

DIRECT EVIDENCE INCREASES SALES

Endorsement letters in your files are of little value. But in the hands of your salespeople, they produce business. Hard-sell prospects demand proof. Put your satisfied letters to work by furnishing facsimile copies to your salespeople. We make photographic copies from anything written, printed or drawn—without the use of glass plates or expensive cuts. Mail orders given prompt attention. Get our samples and prices.

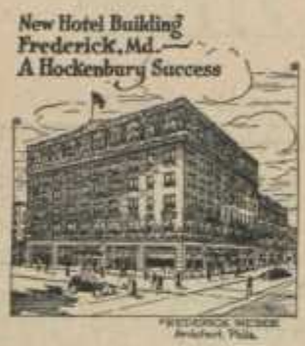
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Experience Counts in Hotel Finance!

Our first counsel to committees formed of your citizens to investigate the hotel problems of your city is this:

to the financial specialist, ask this question: "What hotels have you financed?" —then investigate those hotels!

We urge this query when investigating our own record of achievement—a record that has been equaled by none! Urge it in the strongest possible terms.

"Financing Your City's New Hotel" gives a long list of successful community-built hotels recently financed by this organization. Have you had your copy?

The Hockenbury System Inc.
Penn-Harris Trust Bldg.-Harrisburg, Penna.

plaint alleged that cash commissions were given to captains and other ship officers to induce the purchase of food products from respondent. The commissions, according to the complaint, amount to from 5 to 10 per cent of the invoice price of the goods sold and are added by the firm to its bill, which is paid by the shipowners without knowledge of the commisions received by the officers. This practice, the complaint charged, has the tendency to cause competitors of the respondent to give like commissions for the purpose of protecting their trade, and the added cost of doing business is eventually borne by the public.

Two manufacturers and dealers in dye stuffs also were ordered to cease and desist on charges of commercial bribery. In one case it was alleged that 10 per cent of the company's entire yearly business is paid out in cash commissions to induce sales.

Two firms of merchant tailors came under the ban. In their case the order prohibits the respondents from using the word "mills" as part of their firm name or style of business, or in any manner indicating that they own or operate a mill, unless as a matter of fact they do own or operate a mill. It was the contention of the commission at the trial of the case that respondents' use of the word "mills" as part of the firm name led customers to believe that materials bought from respondents reached them direct from the mills and that therefore they were lower in price than they otherwise would have been.

A case of misbranding against two manufacturers of razors was dismissed for lack of jurisdiction, since interstate commerce was not involved. Three cases containing razors were marked with a price above what was actually charged in order, it was asserted, to deceive the purchasers as to the real value of the razors.

Also dismissed were complaints of restricting competition by rebates and discounts made against nine manufacturers of typewriting and calculating machines.

U. S. Taxes and Mexican Income

IN the Revenue Act of 1921 Congress did not include tax exemption for Americans resident abroad, upon income derived abroad, except for residents of Porto Rico and the Philippines. While this action of Congress was received with manifest disappointment by American business men in foreign countries, one American chamber of commerce abroad, the American Chamber of Commerce of Mexico, believes that it has a good chance to secure relief through legal channels. Through the Special Income Tax Committee of that chamber, nearly a hundred Americans in Mexico, most of them members of that chamber, have arranged with Mr. Charles Claflin Allen, of St. Louis, for the filing of a suit in one of the United States district courts. The suit will be brought in the name of a member of the American Chamber of Commerce of Mexico, who derives all of his income from sources in Mexico. It is felt that this is the best case to try first since the issues are clearly defined.

If the case is won a ruling will then be sought from the Commissioner of Internal Revenue exempting Americans resident in Mexico, whose income is derived partly in Mexico and partly in the United States, from the payment of tax upon that part of the income derived from sources in Mexico. If such a ruling is not obtained, a second suit will be brought covering this second class of citizens.



Sell Service Render Service

Back in 1896 the first S&H Green Trading Stamp was given to a frugal housewife in New England as a discount for cash.

In 1922 thousands of merchants throughout the land are daily issuing millions of S&H Green Trading Stamps to thrifty guardians of the household allowance—as a discount for cash.

Since 1896 merchandising has experienced many changes. For twenty-five years, however, the S&H Green Stamp, adhering closely to its principle of rewarding cash customers, has continually builded business for the merchant and encouraged the soundest and safest method of trading by the consumer; coin on the counter instead of names on the books.

It matters not whether it be the merchant in the metropolis or the general store on "Main Street," each one endorses the Sperry Service because—IT SERVES.

THE SPERRY & HUTCHINSON CO.
114 Fifth Avenue **New York**

Log of Organized Business

Insurance Department Head

JAMES L. MADDEN, of New York, has been appointed manager of its Insurance Department by the Chamber of Commerce of the United States. The naming of Mr. Madden completes within the headquarters of the Chamber the organization of new departments designed to represent the major divisions of business.

Mr. Madden comes to the Chamber from the Metropolitan Life Insurance Company, where he has been directing the work of the company's Policyholders' Service Bureau. He will take up his new duties about the middle of March.

The Chamber's Insurance Department was created to promote the expansion of American insurance nationally and internationally and to bring the seller and buyer of insurance into agreement regarding the fundamental principles of insurance. It is not intended to take the place of nor to duplicate the work of insurance organizations but rather to serve as a focal point for all branches of the insurance business. It will form a medium for expression of opinion by all classes of insurance on current business subjects, just as the Chamber as a whole is able to perform a national service in obtaining and presenting the consensus of business thought for the benefit of the government and the public.

Aside from its function of coordinating the common interest of the insurance field the Insurance Department will render a direct service to the Chamber's insurance clientele and also will supply to business men generally detailed information regarding insurance problems.

"In selecting a new manager for the Insurance Department," said Elliot H. Goodwin, resident vice-president of the Chamber, "we have sought the services of a man who is not a partisan of any branch of the insurance industry. The new manager of the department has not been selected because he is a life man or a fire man, a mutual man or a stock company man, but because he is a man we believe can carry out and expand the policies of the Chamber.

"A canvass of the country was made to secure the right man, a man who would be able to give to the membership of the Chamber such information regarding insurance matters as is being furnished regarding manufacturing, distribution, financial and transportation affairs by other Chamber departments."

Mr. Madden is a graduate of Washington College and holder of a law degree from New York University. As director of the activities of the Policyholders' Service Bureau of the Metropolitan it was his work to carry on educational efforts among the company's policyholders. During the war he was an ordnance officer, charged with speeding up production in plants supplying munitions.

Commercial Aviation

NATIONAL legislation to encourage and regulate commercial aviation is recommended in a report of the Transportation and Communication Department Committee of the Chamber of Commerce of the United States. Copies of the report were sent to members of the Senate Committee on Commerce, and the House Committee on Interstate and Foreign Commerce.

The report points out the need for having



He has his overalls with him too

Each "Cleveland" sales representative is an expert in the use of drills and reamers. His training in the factory teaches him to solve such problems.

When he walks into your office, he is there to solve *your* drilling and reaming problems. Put them up to him. He has his overalls with him, too, ready to go out into your shop and help you.

Behind him stands The Cleveland Twist Drill Co.—producing the most complete line of carbon, Mezzo and High Speed drills.

Bring your drilling or reaming problems to us. Let us tell you about Mezzo, Peerless and other money-saving tools. We can help you not only to obtain greater production but at a less cost per drilling or reaming operation.

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TRADE MARK REG. IN U. S. AND FOREIGN COUNTRIES

PRUDENTIAL
Steel BUILDINGS Sectional



They Come COMPLETE

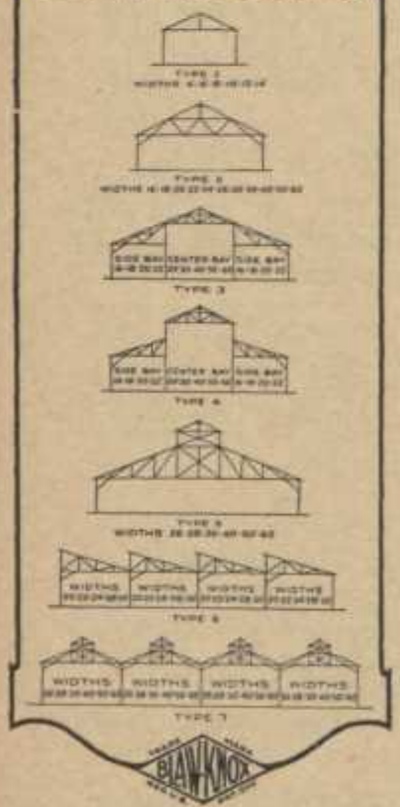
Just think what that means to you!

When you *must* save money, and, equally emphatically, *must* quickly provide additional buildings—for any purpose whatsoever—Blaw-Knox Prudential Buildings "*come complete*" to you, at once, and at a fraction of the cost of especially designed buildings.

Made in seven types, in any width from 4 feet to 60 feet in the single span, and in any desired length. Designed particularly for light manufacturing, storage, warehousing, field work, garages, and for housing men, materials, and equipment. Steel sash, windows, doors, skylights, ventilators, etc., furnished as desired. Absolutely standard in all parts. Fireproof, weatherproof, waterproof.

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SECTIONAL STEEL BUILDINGS



BLAW KNOX

BLAW KNOX COMPANY

PITTSBURGH, PA.
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New York-Boston-Chicago-Detroit-Baltimore-Birmingham-San Francisco-London-Eng.

adequate facilities within the Department of Commerce for promoting commercial aeronautics.

Commercial air transport in the United States is in the doldrums and apparently will remain so until it is given legal and economic status by federal, or at least by unified state action, said the report. Properly developed and articulated with present transportation systems this new agency can become a most valuable addition to the nation's specialized carrier capacity in peace as well as in war.

At present, nation-wide regulative legislation is greatly needed, not only for the ordinary needs of public safety but also to establish the legal status and responsibilities of air transport in national and international business. Canada, Australia and European nations already have provided such legislation. Without practical encouragement, commercial aeronautics in America will continue to lag behind foreign development to such an extent as to constitute a menace to future security and to delay fatally the essential commercial development in which America should rightly stand first.

The report recommends in principle:

The immediate support of basic national legislation on aeronautics providing for appropriate regulatory procedure.

Such legislation should be broadly conceived, in the nature of an enabling act providing for the adoption, administration, and improvement from time to time of an aeronautical code under proper government authorization created by the act.

Adequate facilities within the Department of Commerce for promoting the regulation and development of commercial air transport operations in interstate and foreign commerce.

Intrastate legislation and operations to conform as nearly as possible to the basic federal legislation.

Encouragement of widespread public support of this essential aeronautical legislation.

International Chamber Growing

NORWAY is the latest country to make application for affiliation with the International Chamber of Commerce. Application for membership was recently made through the Norwegian National Committee, which is made up of representatives of the leading business organizations of Norway.

The admission of Norway into the International Chamber will mean that practically all the important countries of Europe, excepting the central powers and Russia, have become connected with the International Chamber. Altogether there are more than twenty nations holding membership in the International Chamber.

Perpetual Inventory

SOME of the advantages to be had from perpetual inventory or stores control are pointed out in a bulletin just issued by the Fabricated Production Department of the National Chamber of Commerce. The bulletin says:

When capital is in the form of cash, it is carefully protected, its receipt and disbursement safeguarded, its custodians held to a strict accounting, but once this capital is converted into materials there is a tendency to become lax, to lose sight of the value of the investment, to husband the capital less diligently, to tolerate practices that are wasteful, inefficient and needlessly expensive.

To those firms and organizations who are not satisfied that their material investment is at an efficient minimum, who suffer periodically from shortages of material, who are unable to make monthly profit and loss statements, who fret at the prospect of the annual

physical inventory, who are not adequately conserving their material investment by giving it the best of physical care, to such the perpetual inventory is recommended.

The perpetual inventory will show the past and present consumption of material, and will allow for a revision of the quantities of material carried to comply with present market and production conditions; will indicate the items that are slow moving, over-stocked and non-standard. The perpetual inventory ties up here with the problem of standardization. In fact, the standardization policy cannot proceed far without the information and data supplied by the perpetual inventory system.

An efficient stores or perpetual inventory system, and that alone, will provide for:

1. Sufficient material to meet production requirements so that production shall at least not be checked by a lack of necessary material.
2. A minimum investment in inventories which is of supreme importance at the present time.
3. An orderly and accessible arrangement of material and the physical safeguarding of material from the elements and theft.
4. The elimination of the burdensome and inaccurate annual physical inventory.
5. A monthly closing by giving the amount and value of material on hand at any time.
6. An invaluable record in case of fire loss.
7. A safeguard against the accumulation of obsolescent material.

What Uncle Sam Owes

HERE in brief is what the Government owes and when it must pay:

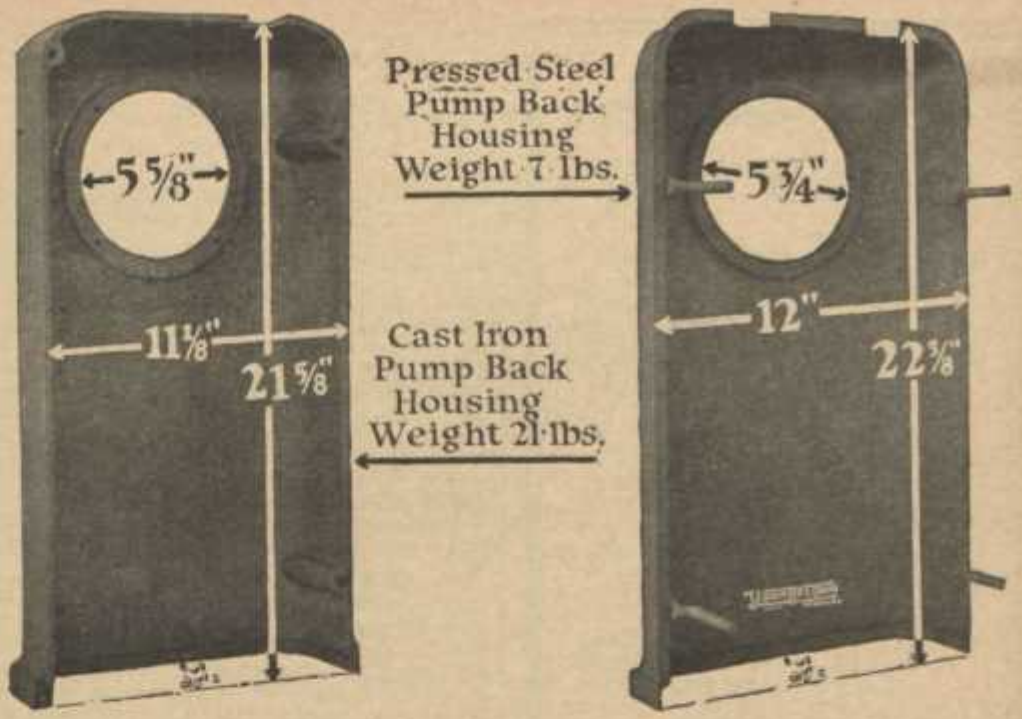
	Billion dollars
The public debt is about	23.5
Of this amount there falls due within the next 15 months a total of about	6.2
This 6.2 billions is made up of the following:	
Victory Notes	3.5
Due in 15 months (May 20, 1923)	
Treasury Certificates	2.2
Due in varying amounts in from 1 to 10 months.	
War Savings Securities	.5
Due in 10 months (January 1, 1923)	
	6.2
In addition there are:	
Treasury Notes	.7
Due in June and September, 1924	
	6.9

THE WAR LOANS

The war loans mature in this order:

	Billion dollars
1. (1923) Victory Liberty Loan	3.5
Redeemable June 15 and December 15, 1922	
Payable May 20, 1923	
2. (1928) Third Liberty Loan	3.6
Payable September 15, 1928	
3. (1938) Fourth Liberty Loan	6.3
Redeemable October 15, 1933	
Payable October 15, 1938	
4. (1942) Second Liberty Loan	3.5
Redeemable November 15, 1927	
Payable November 15, 1942	
5. (1947) First Liberty Loan	1.9
Redeemable June 15, 1932	
Payable June 18, 1947	

[Within twenty-five years, that is, by the time of the maturity of the First Liberty Loan in 1947, not only all of the war loans will have become payable but practically all of the present indebtedness of 23.5 billion dollars will have become payable.]



When Costs Must Come Down



The pump back housing was one of four pressed steel parts in this pump assembly on which pressed steel saved 62 per cent of the weight

WHEN meeting competition makes you get down to bedrock facts and consider *every* material and production cost—consider "pressing it from steel instead." Hundreds of parts formerly cast are now made from pressed steel at lower cost. At the same time pressed steel is adding brand new selling features to well known products.

For example, the pressed steel pump back housing (shown above) was developed by us for The Wayne Tank and Pump Company at a *saving of two thirds in material!* Lighter weight, less freight, more capacity to stand abuse, less cost in finishing and assembling—all great selling advantages for the manufacturer—resulted.

Get the full details

An illustrated folder tells the complete, interesting story about the pressed steel pump assembly developed for the Wayne Company. This folder explains the immense economy of pressed steel in replacing castings and points out how our engineering department works with you from a sample casting or blue print. If you are using any cast parts, it will be to your advantage to write for a copy of the folder and find out what pressed steel can do for you. Mailed free on request.

"Press it from Steel Instead"

YOUNGSTOWN PRODUCTS FOR MANUFACTURER & BUILDER

AGRICULTURAL
TOOL & WEIGHT BOXES · SEATS
LEVER LATCHES · PUSH BOWL GUARD WHEELS
HARROW TOOTH CLAMPS · CULTIVATOR SHEETS
LAND ROLLER HEADS

AUTOMOTIVE
RADIATOR SHELLS · CRANK CASE HOUSING COVERS · BRAKE DRUMS
CLUTCH DISCS · STEP HANGERS
HUB FLANGES

GENERAL
LIFT TRUCK PLATFORMS · TANK HEADS
INDUSTRIAL CAR WHEELS · WHEEL DISCS
HATCH CLEATS · BARREL HEADS
COMPOUND BOXES

FIREPROOFING
METAL LATH

THE · YOUNGSTOWN · PRESSED · STEEL · COMPANY

Youngstown PRODUCTS
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MAIN OFFICES AND FACTORIES
WARREN, OHIO
DISTRICT OFFICES
New York—50 East 42nd Street
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Are you getting the most out of your fire insurance?

If you control large and valuable properties — ask yourself these questions:

1. Is there a fire insurance company that can send a competent engineer to inspect our plant and point out the possible fire hazards?
2. Is there a company that can give us consistent service in this respect and render regular reports of conditions in our plant for our information?
3. If we wish to establish a regular system of self inspection, can we turn to some company for help in such a matter?
4. Is there a company that gives such service and in addition has ample reserves and a past record that begets confidence?

Thousands of concerns now insured in the Hartford Fire Insurance Company will answer these questions in the affirmative.

Even if you are not a Hartford policyholder, we shall be glad to show you by examples how this Fire Prevention idea may be made practical. Write on your regular letterhead to:

Department of Special Service

Hartford Fire Insurance Co.

Hartford, Connecticut U. S. A.



The Seal of Certainty on a Fire Insurance Policy

There is a local agent of the Hartford near you. Shall we tell you his name?

Nation's Business Observatory

THE TRADE association sky may have been somewhat cleared by the publication of the correspondence between Secretary Hoover and Attorney General Daugherty, but there are still doubters. Some of the comment of the trade papers might be summarized by this extract from an editorial article in *The National Provisioner:*

Recent decisions of the federal supreme court as to what trade associations can do left it necessary to have further practical interpretation. This the recently published correspondence seems to do—although some say it doesn't.

Which is a conservative point of view.

The Senate, as reported by our cherished contemporary, the *Congressional Record*, was distinctly worried—at least some if its members were. Said Senator Norris of Nebraska:

Mr. President, it seems to me quite evident that whatever, if anything, is left of the Sherman anti-trust law as it applies to big business has been repealed by Mr. Hoover in this article. If it means anything, it seems to me it means that in the future no attempt will be made to prosecute big business because it combines or forms a monopoly, providing it is done according to the methods mapped out in Mr. Hoover's letter, which means in effect, as I understand the article, that business concerns that want to combine and form a trust or a monopoly have only to announce that their combination is not in restraint of trade and is not a monopoly, at least as far as can be ascertained on outside observation.

Textile World draws more hope from the letters than do most of the other trade publications:

The reply of the Attorney General to the questions propounded by Mr. Hoover has a refreshing air of frankness about it that has been more or less lacking in certain previous pronouncements from this office. The direct statement that nothing illegal can be noted in the majority of activities concerning which Mr. Hoover inquires is apparently a decided deviation from previous utterances on the same subject.

While apparently misunderstanding the purport of one or two of Mr. Hoover's queries Mr. Daugherty certainly agrees in principle with the aims of trade associations even as to the gathering and dissemination of prices, although reserving the right to a contrary opinion in specific instances, where the application of the principle may be proven to be illegal. This stand on the part of a judicial officer of the Government is heartening at a time when business needs all the encouragement possible, instead of additional handicaps to successful operations.

"A code for trade associations," says *Coal Age*, and speaks of the tacit approval given by the Attorney General to the principles set forth by the Department of Commerce. But it adds:

It is fundamental that the information collected and compiled must be equally available to the public, the buyer, as well as to those contributing to the facts. It is pointed out that in the past the associations giving out their data have been in the minority. This must be corrected.

The support given to the association idea by the government is founded on the theory of mutual interchange of information, not only between members of a single group but between groups. The coal men must promulgate their facts to the buyers of coal, and the buyers of coal tell their results for the guidance of the coal industry. We are not in position to amplify the trade bureaus and proceed ahead at full speed. We may be back where we were two years ago, but at least we have some assurance of non-interference.

After all it is the courts which will decide, says *Oil, Paint and Drug Reporter:*

The opinion of the Attorney General as expressed in his reply to a number of specific questions by the Secretary of Commerce is concerned with a recital of permissible functions; scarcely any attempt is made to pronounce any prohibitions. This fact arises from the circumstances leading up to the expression of the informal opinion.

As the inquiring Secretary had drawn a fair picture of the law abiding trade organization and sought simply to have his conception criticized, the Attorney General, justly cautious, had no reason to go beyond the inquiry. An out-and-out definition of what is legal and what is not, must, obviously, come from the courts.

The *Iron Age* concerns itself chiefly with that provision of the Attorney General's letter which reads: "Provided always that whatever is done is not used as a scheme or device to curtail production, or enhance prices, and does not have the effect of suppressing competition." The *Age* seems to find more hope in the fact that "Attorney General Daugherty can be depended upon to act with deliberation," than it does from anything he put in his letter.

That same provision moves the *Southern Lumberman* to say:

Just who shall exercise the right of judging whether or not these activities, if undertaken, encroach upon the inhibition thus laid down, Mr. Daugherty does not say, but he does say, however, that "it is impossible to determine in advance just what the effect of a plan when put into actual operation may be." If the plan be adopted and natural causes force lumber prices upward, shall this be taken as prima facie evidence of the illegality of the plan itself? Mr. Daugherty, it appears, reserves for himself the right to pass final judgment upon this form of activity; and his letter, while casting a ray of light upon the subject, leaves the entire matter in an undesirable state of uncertainty.

Higher Wheat and Straighter Marketing for the Farmer

THE "pity the poor farmer" folks are now somewhat less active. The prices of many farm products are up, and that favorite method of farm relief, the cooperative marketing law, has gone through Congress. It makes the Secretary of Agriculture the judge of when a cooperative association has reached the point of monopolizing or restraining trade.

Many farmer papers hail it as a panacea for all sorts of agricultural ills. A view much calmer, and more interesting for that very reason, is that of *The National Stockman and Farmer*, which says:

We have always believed that cooperative associations now possess the right to act collectively just as long as such action is not detrimental to public welfare or contrary to the rights of others. It is inconceivable that any legislation can stand which confers on cooperative associations power to commit acts contrary to public interest. If this assumption is correct the new law will do little more than prevent a few prosecutions which could not have succeeded under other circumstances. Just now we know of no legitimate agricultural cooperative effort that is being assailed at law, and we have never known of one that was successfully assailed.

An opinion from a source which cannot be

considered as sympathetic with the agricultural bloc is that of *The Commercial and Financial Chronicle*, which says:

This last attempt of the bloc is a leap in the dark. Almost, listening to the debate, it would seem that the enactment is one done in desperation. A crisis, a terrible situation, exists. *Something* must be done. Is it to make a huge "gesture"? Throw out the life-line, though those who are drowning cannot even swim far enough to grasp it. Save the perishing, though they must save themselves, yet are too far from succor, and will go down in the dark, deep waters before any aid can come. Let the farmers organize as capitalists if they can; if they can't let them organize, nevertheless—though the foreign markets are far away and the little local associations offering products have no backing save a desire to get rid of hitherto middlemen, who could be held accountable to their contracts. No one can hereafter say that legislation did not rise to the occasion. And though a brood of "associations" gather, like an invasion of locusts to prey on the farmers at their own command, no one can point to the *profits* of middlemen ever again in the land of the free!

Compare with this a view from a paper which represents the grain trade. *The Price Current-Grain Reporter*, which sees nothing but ill results for the farmer more than for the middleman, whom the act intended to wipe out:

There is opportunity made by the act for certain producers, aided by the impending Fordney tariff act, to squeeze American consumers with prices on certain products.

So far, however, as the one real monopoly desired to be consummated by means of this act—nation-wide control of the grain markets by farmers' organizations—there is not the slightest danger of such a thing.

The difference between collectively assembling, processing, storing, handling and marketing a handful of raisins, prunes, or oranges grown in narrow localities, and some billions of bushels of grain grown in all sections of the country precludes any such thought entering the mind of one capable of grasping the conditions involved in the problem of finding buyers for the grain and then of moving it from the farms to those buyers and to keep the buyers supplied during the many weeks intervening between harvests.

It is quite out of the question that this studied attempt to enable grain growers to arbitrarily increase their prices in the face of an unconsumable surplus can come to fruition through collective marketing or by means of tariff protection. The natural law and economic common sense condemn it. The experience of the human race condemns it. Once the unconsumable surplus is given a fictitious local valuation, its volume increases and the difficulty of disposing of it is enhanced. Therefore ultimately agriculture is ruined for the time being by the effect of a law which stimulates production which cannot find a market and checks its sale abroad by enhancing its price.

Meanwhile, wheat and other agricultural products have marched upward, either with or without the help of the bill. As the paper just quoted puts it:

Everyone knew that agriculture would come back, but the suddenness of the rebound has been surprising. To the prophets of perpetual disaster the come-back must be peculiarly disconcerting—let us hope not distressing—though all must confess to a certain pride of opinion and some to a peculiar confidence in their own powers of divination. But with wheat at $1.45, corn at 62 cents, and hogs at $11 at Chicago, and "strong at the close" on February 25, predictions of disaster to the farmer and utter ruin of agriculture for the future sounds like a child's lament of universal ruin when the candy disappears.

(*Continued on page 52*)

A book with a purpose



Our 150 page book, "What Industrial Engineering Includes," gives to every executive reading it a basis for action toward securing increased profits and reduced costs.

Now, as never before, additional and, perhaps, sole profits must come from reduction of wastes and costs thru improvements in management and thru direct efforts and actions of the executives and managers themselves.

Including over 100 definite things to do and over one thousand results, this book covers a wide field and we are confident that no executive will read it without benefit to himself, and to his company.

It is indexed so you can easily find data covering Reduced Inventories, Reduced Overheads, Reduced Lost Sales, New Lines, Unused Plan Capacity, Estimating Price, Tool Losses, Investment Turnovers, Routing and Shipping, Standardized Expenses, Use of Records, and hundreds of others.

Requests quickly exhausted first edition and many endorsements compelled additional printings. A new supply is available and a copy will be sent without obligation to all executives requesting it. Requests upon firm stationery assure preferred attention.

Its main headings are:

Conservation and Maintenance of Finance
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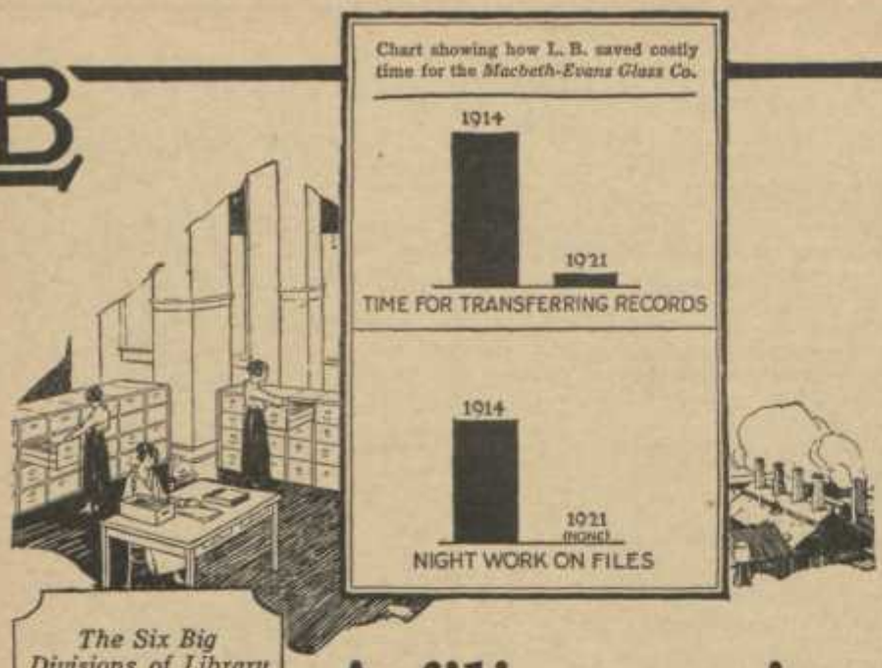
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Some reasons for the advance in wheat are given in the *Modern Miller:*

There is a strong opinion that this advance found its incentive in New York and Liverpool. It came at a surprising time—in the face of the movement of the Argentine surplus. Chicago only figured as a clearing house; New York and Liverpool molded the opinion. When we look to Argentina we find some reduction in estimates of the surplus, but certainly the Argentine situation would not account for an advance in wheat from the low point, $1.03 to the high point, $1.49¾, approximately 47 cents. Argentina will not stand back now in moving its surplus. It came at a wonderful time for Argentina.

Political unrest in India and a none too reassuring situation there in wheat was a condition that did not develop acutely enough to explain the advance. Then we look to Russia and Washington and we wonder if New York and Liverpool did not take the tip from these sources. There is a good deal of talk of a political wheat market. Russia, the second largest wheat producer in the world, has collapsed with a famine that is now being felt in Moscow and Petrograd. We are shipping them $20,000,000 worth of seed wheat. The Bolshevik government is buying $12,000,000 of supplies; the Senate is advocating a loan of $30,000,000 to aid them or make them help feed their own people with bread. There may even be some assurance that Russia is to be a steady buyer until next September, when the new crop is ready.

Answering the Question "Who Gets It?" in Grain

WHAT causes that difference in price between the pig on the farm and the pork chop on the table? That question in one form or another has always been asked. *The Price Current-Grain Reporter* has found one answer in an advertisement printed in a local paper by J. K. McGonagle, a grain dealer at Washta, Iowa, and it's worth reprinting as an answer to some talk of graft:

Here is the way the graft is worked. On January 21 I paid 35c for No. 2 yellow corn and sold a car at 36¾c. It was worth in Baltimore that day 61¼c:

Price at Washta	35.00c
My profit	1.75c
Freight to Baltimore	23.50c
Terminal buyer's profit, for unloading, weighing and reloading	0.75c
Baltimore broker's profit	0.25c
	61.25c
No. 2 yellow corn was worth at United Kingdom or Continental ports January 21	73.37c
Less cost at Baltimore	61.25c
For unloading from cars to vessels, exporter's profit, and ocean freight from Baltimore	12.12c

The Price Current points out that the word "profits" in the table is unfortunate, since 2.75 cents, which are so figured as the "profits" of three handlers, include a number of charges.

Showing That Half as Much Oil Will Last Twice as Long

IN The Nation's Business last month we commented editorially on our troubles in keeping track of the petroleum products, and now comes *Petroleum Age*, which sympathizes with us:

Early in January the United States Geological Survey estimated the remaining petroleum reserves of the United States at 9,500,000,000 barrels. The February issue of the *Scientific American*, in an article bristling with wisdom

and statistics, gives us yet unrecovered only 5,814,000,000 barrels.

It seems to be going out pretty fast. At that rate it should be all gone about St. Patrick's Day.

But—

The Geological Survey estimates, by its line of reckoning, that the oil will really last twenty years, while the *Scientific American* chappie, with only about half as much, puts the "end point" fifty years off.

If you need any more proof that the statistics on petroleum are queer, keep on reading. Around every corner there's a laugh.

Look Before You Leap to Germany

WOULD it pay an American manufacturer to take advantage of low labor costs in Europe and have part or all of his work done abroad?

Putting aside any question of patriotism, what is the economic answer?

These questions are pertinent, and they have been called to the attention of the Departments of Commerce and Labor by an American manufacturer who has been approached by an American company with a proposal that it arrange to have some of his products made abroad.

The American manufacturer is Edward M. Waring, president of the American Electric Cutting Machine Company, which makes automatic machinery for the garment trades. Some weeks ago Mr. Waring received a letter from the Interocean Holding Company, whose letterhead carried this line:

"Organized at the instance of various German, Hungarian, Austrian and Czecho-Slovakian interests."

Here are three paragraphs from the letter:

You have recently received from us a card in reference to "Helping Germany Come Back."

In this connection, you realize that labor conditions in Central Europe make it obvious that it might be advantageous to have some of your products manufactured there.

Be that as it may, we know that you are interested in, at least, securing quotations on tentative quantities.

The writer then announced that he was about to sail for Europe and would like Mr. Waring to send him a sample of his output with specifications and plans so that he might "secure manufacturing figures for reproducing your article in Germany for resale in America."

Mr. Waring thought there was another point from which to view this. It seemed to him, as he wrote Secretary Hoover, that it was "a plan to transfer our industries bodily to Germany and work untold injury to both the business and labor interests of the country."

Apart from Mr. Waring's point of view of the danger to the country as a whole, there is strong argument to be advanced that the individual manufacturer would be taking great risks in trying to make any part of his products abroad. The Foreign Commerce Department of the National Chamber calls attention to these five points which ought to be considered:

1. The outstanding point is the general uncertainty in the German economic situation. The present level of prices and wages in Germany must be considered in relation to the demoralization of exchange, the artificially low prices of food, coal and rail transportation at national expense, uncertainty in regard to future taxation program, and the whole reparations problem. Even



Copyright by M. P. Anderson, Seattle

Seattle

Healthiest City in America

SEATTLE'S average annual death rate for the past fifteen years was 9.78 per 1,000, the lowest in the United States. Portland's (Ore.) 10.75; Los Angeles' 14.45; Chicago's 14.65; New York's 15.83; San Francisco's 15.92; Boston's 17.64; Cincinnati's 18.04, and New Orleans' 21.02.

Copyright by Lothrop, Seattle.

Seattle has the lowest death rate from tuberculosis, 64.13 per 100,000, as against 152.98 for San Francisco, 174.92 for Cincinnati, and 252.14 for Denver; also the lowest from dysentery, 16.26 per 100,000 as against 107.03 for Buffalo.

Maximum temperature 1921—80 degrees. Average maximum summer months' temperature for 20 years—71 degrees.

Seattle is the baby's paradise. Only 51 out of 1,000 babies born in Seattle in 1920 died the first year, contrasted with 91 in Milwaukee, 101 in Buffalo, 102 in Boston, 106 in Baltimore, 108 in Pittsburg, and 134 in Fall River.

Seattle's health is due to an entire absence of severe heat and cold, of cyclones, hurricanes, earthquakes, and severe electrical storms, to a life-giving blend of sea and mountain air, an abundance of pure water, an exceptional milk supply, perfect drainage, a climate that lures one out into the open the year around and a scenic environment whose beauty and sublimity lift one above the petty worries of life.

The climate gives a 20 per cent margin in manufacturing costs over the East, due to the increased efficiency of labor.

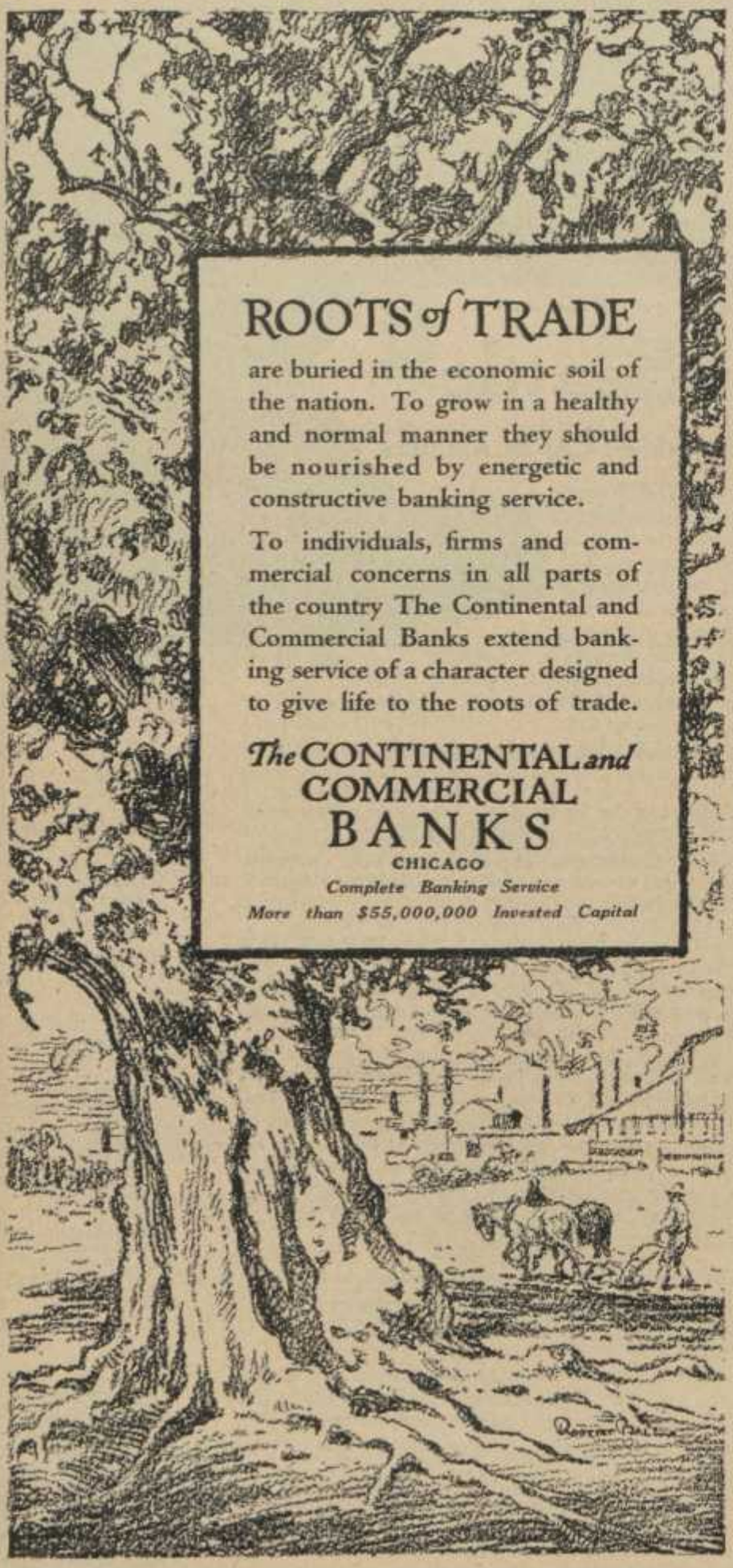
Six transcontinental railroads, coastwise steamships, the Yellowstone Trail, the National Parks, Pacific and Evergreen Automobile Highways will bring you to Puget Sound for your vacation.

Write for the booklet, "The Charmed Land," for vacations; or The Seaport of Success, for industrial and economic facts.

Seattle is a wonder city, the center of the richest area on the continent, the nearest American port to the wealth of the Orient and Alaska, and has tributary to it one-sixth of the nation's water power.

Manufacture in Seattle and distribute from Seattle for Pacific Coast and Oriental markets. Live in Seattle for the pure joy of living. Put your problems up to the SEATTLE CHAMBER OF COMMERCE, 913 Arctic Building, Seattle, Wash.

SEATTLE
The Seaport of Success



assuming that present conditions make for a low cost of production as compared with that prevailing in the United States, it would be extremely dangerous to decide on any policy on the basis of conditions which must necessarily be temporary.

2. Taxation. In the recent note transmitted to the Reparations Commission, the German government has committed itself to a taxation program calculated to increase the total revenue from 55 to 100 billion marks, paper. Among the specific measures promised by the Government are: A continuation in a modified form of the present capital levy, an increase in the turnover tax from 1½ to 2 per cent, an increase in the coal tax from 20 to 40 per cent, an increase in certain customs duties and the collection of import duties on a gold basis, practical abolition of food subsidies, an increase in stamp taxes, and a compulsory internal loan of one billion marks, gold. According to a comparative study of tax burdens in Germany and France, made under the auspices of the Reparations Commission, the annual per capita burden of taxation in Germany, taking into consideration the internal purchasing power of the mark, ranged in 1921 (on the basis of the revenue collected during Jan.-Sept.) from $30.70 to $38.33, depending on the index number used as a basis for determining purchasing power. While it is true that the burden of taxation is lightened considerably by the enormous issues of paper money, the stabilization of exchange, and the consequent cessation of the flow of paper currency, which is regarded as a necessary basis for any permanent program of reparations payments, will tend to intensify the effect of the tax burden and put an end to the enormous paper profits on which the present so-called German prosperity is based to a large extent.

3. Exchange. The gain from the depreciation of the German mark, as it affects costs of production, is due to the difference between the purchasing power of the mark in Germany and abroad. The internal price and wage levels generally lag behind the fluctuations in the exchange value of the mark. Even if we leave out of consideration the fact that this advantage disappears to a considerable extent in the cases of products made of imported raw material, which has to be bought with depreciated paper money, the constant fluctuation of the currency introduces a speculative element which should not exist in the conduct of sound business. The profits made under such conditions are very often affected by such uncertain elements as the movement of exchange, the obtaining of an export permit, retaliatory taxation in countries of destination, domestic control of exchange and taxation. Another very important point is that as conditions improve in Germany, the advantages derived from depreciated exchange will tend to disappear, and with the removal of artificial restrictions and subsidies, the domestic purchasing power of the mark will tend to approximate its exchange value.

4. Reparations. Whatever changes in the reparation terms may be agreed upon, it is safe to assume that they will involve considerable reforms in taxation, elimination of indirect government subsides, and, in all probability, a forced loan. An increase in freights rates averaging about 33 1-3 per cent, but utterly inadequate from the standpoint of eliminating the large deficit from the operation of the railways, went into effect on February 1 and an increase in the price of coal in accordance with the world market price has practically been decided upon.

5. Labor conditions. The political and economic status of labor in Germany is a

very uncertain element in the situation. The dislocations in real wages resulting from the constant fluctuations of the mark are taken care of by changes in nominal wages. It is generally agreed that real wages are at present below the pre-war level and any attempt to meet the reparations payments by a further depression of the wage level may meet with considerable resistance on the part of labor organized along political lines.

Cooperation in Foreign Trade

By O. K. Davis

Secretary, National Foreign Trade Council

A FOREIGN loan policy that will enable idle factories to get to work."

This is one of the subjects to come before the annual meeting of the National Foreign Trade Council to be held in Philadelphia on May 10, 11 and 12. It illustrates a means by which the council hopes to impress the fact that every workman, farmer, and business man is vitally interested in our trade with other countries, regardless of whether the thing he produces goes directly abroad or not.

Methods by which our trade can be improved to the benefit of the entire country are to be devised—and remember that trade is a two-way word. The subjects will be discussed by the leading business men of the country. Since the productive machinery of the United States has been so increased, our need for outside markets is greater than ever. Whether we wanted to or not, we have become a world power in finance and trade. If we are to hold the position to which our wealth and manufacturing ability entitle us, trade with other countries will have to be expanded.

To supply a means by which individual problems can receive expert attention, the National Foreign Trade Council has developed a Trade Adviser Service, which each year is becoming a more important feature of its convention. This Trade Adviser Service is designed to provide information on any foreign trade problem and then to give advice as to how best to handle it. Every effort is being made through a national committee to organize the Trade Adviser Service to a point of maximum efficiency and helpfulness. E. P. Thomas, of the U. S. Steel Products Co., is supervising the service for the Foreign Trade Council; C. J. Warren, of the Remington Typewriter Co., is actively directing the selection of trade advisers; while C. Lyon Chandler, of the Corn Exchange National Bank, Philadelphia, will have charge of local arrangements.

The program of the National Foreign Trade Council meeting shows that this organization has gone straight to the heart of the ills that are slowing up the work in our factories and tying up our ships. The general theme is "Financing and Expanding Foreign Trade." The tentative program follows:

First General Session, Wednesday morning, May 10:

Call to order by James A. Farrell, chairman.
Organization of Convention.
A Foreign Loan Policy That Will Enable Idle Factories to Get to Work.
A Practical Method of Putting Our Surplus Gold to Work in Financing Foreign Trade.
Discussion: Advantage of this Policy to: General Farm Products, Manufactures, Cotton, the Foreign Trade Merchant.

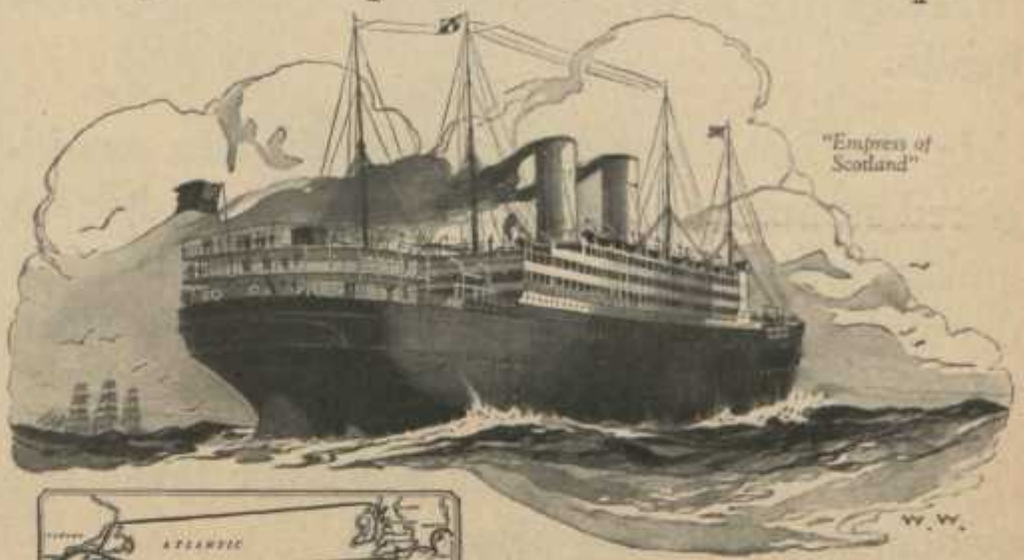
Second General Session, Afternoon:

Effect of High Taxation in the Exchanges.

(*Continued on page 56*)

CANADIAN PACIFIC

"Empress" Express Route to Europe



Via Quebec *and the* St. Lawrence

Only Four Days on Atlantic to

CHERBOURG—SOUTHAMPTON—HAMBURG

Old French Canada Montreal, the largest inland port in the world, with its historic Chateau Ramezay and alluring side trips.



London

Quebec, the "Gibraltar of America," with its Citadel, its Plains of Abraham, and memories of Wolfe and Montcalm, with its old world French quaintness and charm, and palatial Chateau Frontenac.

"Empress of Scotland" The *"Empress of France"* will be joined this spring by the new *"Empress of Scotland,"* the largest liner on the St. Lawrence route.

This new queen of the Canadian service is a magnificent oil-burning vessel of 25,037 gross tons with every appointment for the comfort of the traveler. Twelve public rooms, including regally decorated ballroom, music-room, smoking-rooms, and palm garden. All the "Empress" trans-Atlantic liners have large well-ventilated staterooms, and service and cuisine to satisfy the most experienced travelers. Everything Canadian Pacific standard—none better.

Down the St. Lawrence The voyage down the river—the broad highway traveled by La Salle, Cartier and Champlain, pioneering adventurers from the old world—with the beauties of primeval forest and rocky cliffs on either hand, the shores dotted with thriving hamlets and busy towns.



Paris

Then the broad expanse of the Gulf of St. Lawrence, past Anticosti, the Magdalens, Cape Breton Island and Newfoundland to the open sea.

A Fresh-Water, Salt-Water Journey An "inland voyage" followed by four glorious days on the Atlantic. A fresh-water, salt-water journey on board one of the large finely appointed "Empress" liners from Quebec to Cherbourg, Southampton and Hamburg.

One-Class Service The Canadian Pacific also offers a splendid one-class service between Montreal and Quebec and Liverpool, Glasgow, Southampton and Antwerp.

Bridging Two Oceans—Linking Four Continents The Canadian Pacific is the world's greatest transportation system. With 19,600 miles of railway it reaches practically every part of Canada and many parts of the United States. Its trans-Atlantic and trans-Pacific steamship services link America with Europe, Asia, the Orient and Australia.



Berlin

For rates and full information about your ocean and rail trips,

Ask the CANADIAN PACIFIC

Apply to General Agents at

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Boston, Mass. 405 Boylston St.
Buffalo, N. Y. 140 Pearl St.
Chicago, Ill. 49 No. Dearborn St.
Cincinnati, O. 420 Walnut St.
Cleveland, O. 1040 Prospect Ave.
Detroit, Mich. 1250 Griswold St.
Los Angeles, Cal. 605 So. Spring St.
Minneapolis, Minn. 611 Second Ave., So.
Montreal, Can. 141 St. James St.
New York, N. Y. Madison Ave. at 44th St.
Pittsburgh, Pa. 340 Sixth Ave.
Portland, Ore. 55 Third St.
San Francisco, Cal. 675 Market St.
Seattle, Wash. 608 Second Ave.
St. Louis, Mo. 420 Locust St.

Canadian Pacific Offices All Over the World.

What is Prosperity?

Prosperity is a condition of sound business health.

In the last eight years business has experienced stimulation and reaction, underproduction and overproduction, high wages followed by unemployment, extravagance and want, quick wealth and wreckage.

These were symptoms of economic fever, not evidences of business prosperity.

They brought home again to business the fundamental truths that credit is not capital, that opportunities are not resources.

Real prosperity is nearer than it has been for several years because business has pretty generally returned to the simple, economic laws upon which prosperity is based. America is saving instead of wasting, investing instead of speculating, paying off old debts and employing credit soundly.

The National Bank of Commerce in New York expects a steady progress toward better times because of a growing tendency in business toward conservatism, economy, efficiency and hard work.

National Bank of Commerce in New York

Capital, Surplus and Undivided Profits
Sixty Million Dollars

The Factor of Depreciated Currency in Competition.
Why We Must Have Foreign Trade.
Group Session, Evening:
Group I. Education for Foreign Trade—
Misstatement about Foreign Trade.
Foreign Trade Education in the Schools.
Group II. Banking Facilities for Foreign Trade—
Protection Against Exchange Losses.
Uniform Commercial Credit Instruments.
The Exporter's View of the Present Attitude of the Banks Toward Foreign Trade. The Bank View.
Group III. Problems of the Export Manager (in cooperation with the Export Managers Club of New York).
Third General Session, Thursday morning, May 11:
The Merchant Marine—an International Problem.
Inland Waterways as Developers of Traffic.
Shipbuilding Prospects.
Marine Insurance—Factors in Rate Fixing.
Group Session, Afternoon:
Group IV. Ocean Carriage—
Vital Points of Insurance Policies.
The Carrier's Responsibility—The Hague Rules, etc. (*a*) Shipper's View. (*b*) Underwriter's View. (*c*) Carrier's View.
Group V. Export Sales Promotion (in cooperation with the American Manufacturers Export Association)—
Lessons of the Last Year.
Bonded Service as a Selling Argument.
The Square Deal Through Arbitration.
Service as a Sales Promoter.
Group VI. Competitive Conditions Abroad.
Trade Adviser Service, Evening:
Fourth General Session, Friday morning, May 12:
Meeting Preferential Tariffs.
Factors That Will Help the Exchange Situation.
A Foreign Trade Policy for Americans.
Group Sessions, Afternoon:
Group VII. Combination for Export—
How the Webb Law Works.
An Opportunity for the Smaller Manufacturer to Meet Present Conditions.
Methods of Organization.
Group VIII. Export Advertising (in cooperation with the Association of National Advertisers)—
Sales Promotion through Advertising.
The Use of Dealers' Helps.
The Essentials of a Market Survey.
Group IX. Credits and Credit Information (in cooperation with the National Association of Credit Men)—
Guide-posts in Foreign Credit Granting.
One Method of Safeguarding the Credit Risk.
Discussion: Troubles Hour.
Banquet, Evening:
Report of General Convention Committee—Final Declaration. Address.

To Correct Our Calendar

A SHORT time ago the monthly statement of one of the largest chain store concerns in the United States showed a very marked falling off in business during the month, as compared with the same month the previous year. Up to that period the monthly gross receipts had steadily increased, and naturally the reported decline caused the management and stockholders much concern. An investigation of the cause disclosed the fact that there were only four Saturdays in the month, whereas the same month the year before had five Saturdays. On a five-Saturday basis the company's business for the month would have shown a gain.

Here is an example of the confusion in business resulting from the inequalities of the calendar. Yet this is but a minor matter compared to other difficulties that business

has to contend with because of differences in the number of days in the months.

For instance, February has twenty-eight days. While that is actually less than one-thirteenth of a year, the same monthly salaries and rents are inequitably paid. Monthly business charges for maintenance, depreciation and the like, are in that way unfairly proportioned.

These are a few of the arguments put forth by proponents of a plan of calendar reform. They are supporting the liberty calendar bill introduced in the House by Representative Schall, of Minnesota. This bill would divide the year into thirteen months of twenty-eight days each. It would definitely fix for all time the dates of every day of the week, and thus dispense with the need of yearly calendars and end the inconvenience of having to refer to these to establish the coincidence of days and dates. To illustrate; the Sundays of each month would be on the first, eighth, fifteenth and twenty-second.

The odd day remaining in the 365-day year would be disposed of as "New Year Day." It would have no other designation, and would be retained as a legal holiday preceding January 1. It would be included in that month as January "0." In leap year the additional one day would be known as "Leap Year Day." It would precede July 1 as a summer holiday, without a week-day name, as July "0."

Making the Days Stay Put

THESE two changes are designed to fix each of the seven week-day names permanently in their fifty-two recurring yearly dates, then the same day of the week will always cycle to its four fixed dates every month, so that the passing day of the week will denote its current monthly date.

Another important change, from a business standpoint, is to abolish moon-wandering Easters, by internationally fixing Easter at its most convenient date, leaving each nation free to fix its own national holidays and festivals. According to the plan, holidays would always fall on Saturday.

Fluctuation in the date of Easter has caused considerable losses to business men, according to proponents of the calendar reform plan. It has been estimated that in Germany alone merchants dealing in men and women's wearing apparel have lost as much as $30,000,000, when Easter fell early.

An international campaign to put the new time schedule into effect in 1928 is now being carried on by the International Fixed Calendar League, of which Moses B. Cotsworth, of Vancouver, British Columbia, is the moving force. Mr. Cotsworth lately came to this country to attend the convention of the Liberty Calendar Association. The convention endorsed Mr. Cotsworth's plan for a thirteen-month year.

"We earn and pay by the month," said Mr. Cotsworth, "but have not an equal monthly measure except for prisoners jailed to serve equal months of thirty days. They are the only class who know what a month really is.

"All calendar periods of earning and spending should be equal to help regular employment, circulate money, and stabilize business. Bank drafts, trade bills, wages, and adjustments are complicated by weekly wages being differently split up by the parts of weeks ending on one and beginning the next month.

"Five Saturdays each were in January, April, July, October, and December, 1921, when housekeepers were forced to buy a fifth week's provisions out of equal monthly incomes. Many thus trend to get behind in the payment of their bills. It has been



"Safe bonds made it possible"



"Mother, this trip to Europe had its inception some twenty years ago when I began buying bonds.

"Fortunately, I began my investing through a house which helped me to make the best use of my funds."

Building an investment fund of well selected bonds is the key to much in later life which is worth having and worth doing.

Your main safeguard is the house you deal with. Halsey, Stuart & Co. owes its success and growth, these many years, to underwriting and marketing only bonds of a thoroughly conservative type.

Our booklet, "Choosing Your Investment House," explains the varied services of modern investment banking—and how to use them. Write for booklet NM-2

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Ford Bldg.	1st Wis. Nat. Bk. Bldg.	Security Bldg.	Metropolitan Bk. Bldg.

Fill in and mail for booklet, "Choosing Your Investment House," NM-2

Name.....

Street..... *City*.....

BUSINESS STUDIES

A number of pamphlets are available for distribution by the Chamber of Commerce of the United States. They deal with business subjects, being the results of studies made by committees and departments of the Chamber. There is given below a list of some of the booklets. One copy of each will be sent free on request. A nominal charge amounting to the cost of printing will be placed on additional copies.

Our World Trade—Value and Volume of Principal Imports and Exports Between the United States and the Chief Foreign Markets, January to September, 1921.

Free Zones—What They Are and How They Will Benefit American Trade.

Merchandise Turnover and Stock Control.

What a "Cost System" Should Do For You.

International Credits—Referendum No. 1, issued by the International Chamber of Commerce on the application of the Ter Meulen Plan.

Fabricated Production Department—Its service to those engaged in manufacturing and production.

The Railroad Situation—Statement of Secretary of Commerce before the Interstate Commerce Commission.

Means for Presenting Public Interest in Transportation—Report of Railroad Committee of the Chamber of Commerce of the United States.

Trade Associations Activities—Correspondence between Secretary of Commerce Hoover and Attorney General Daugherty on Legitimate Activities of Trade Associations.

Overhead Expenses—A Treatise on How to Distribute Them in Good and Bad Times.

Depreciation—A Treatment on Depreciation and Production.

Reduction of Merchandising Expense—Methods which Distributors Are Applying to Ease the Process of Readjustment.

Promoting Foreign Trade—Foreign Trade Work of Commercial Organizations.

European Problems Affecting American Business—Report by a Special Committee on Economic Conditions in Europe.

Railroad Questions Before Congress—Testimony of Railroad Security Owners.

How You Should Vote on a Referendum.

Why You Should Vote on a Referendum.

The Schools of Your City—The General Situation.

A Housing Program.

The City Plan and Living and Working Conditions—A general outline of the subject.

The Building Situation.

Agricultural Bureaus and Committees.

Commercial Organization Credit Bureaus.

Building and Maintaining a Local Chamber of Commerce.

Retail Trade Extension—Activities undertaken by Chambers of Commerce.

Industrial Development—Activities undertaken by Chambers of Commerce.

German Competition—Movement of trade as indicated by official statistics.

National Councillors Service Opportunity—Address before mid-winter meeting by A. C. Bedford.

National Chamber's Civic Work—Purpose of the Civic Development Department.

CHAMBER OF COMMERCE OF THE UNITED STATES, WASHINGTON

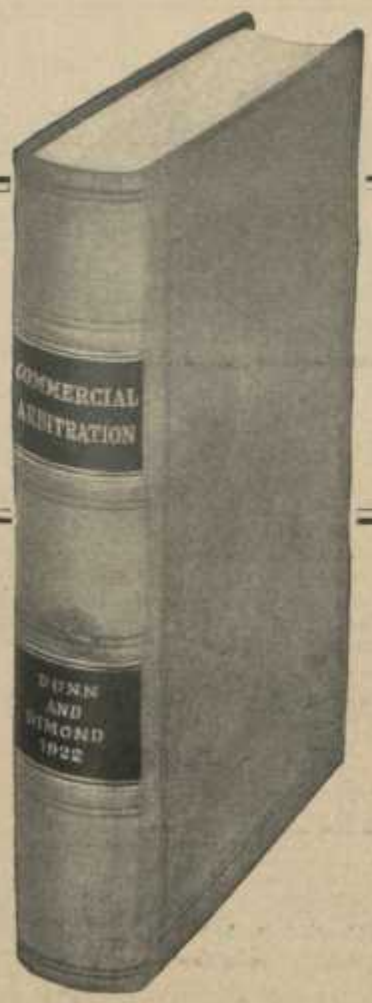
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Wanted! Factory location, requiring about 40,000 square feet of light, sanitary space for manufacturing high grade men's clothing.

Community must have large supply of women workers. (300 employed today.)

In replying please state whether city is open shop and all other details.

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HERE, for the first time, is a book which tells how Commercial Arbitration relates to *your* business and how to use it.

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"Commercial Arbitration" by H. Arthur Dunn and Henry P. Dimond, two of the foremost authorities on Commercial Arbitration in the country, contains not merely the rules of the various trade bodies, but the *interpretation* of the rules. It shows the evidence, procedure, and precedents as brought out in leading cases decided by arbitrators.

The book has been compiled from the records of Trade Organizations and Chambers of Commerce thruout the United States. The officials of these trade bodies have enthusiastically urged and cordially aided its preparation in order to meet the definite and repeatedly expressed needs of business men, lawyers, brokers, bankers and students.

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How should an Arbitration submission be prepared?
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figured out that 13 per cent of retail losses in bad debts are due to the differences in the number of Saturdays in the month.

"Just as the world was benefited by the establishment of standard time forty years ago, so also will it be improved by the adoption of the new calendar plan by all the nations of the world."

The "Ifs" of April in Coal For Industry

AN ANALYSIS of the coal situation, the purpose of which is to give business men information regarding possible supplies in the event of a strike of miners on April 1, was issued today by the Coal Bureau of the Natural Resources Department of the Chamber of Commerce of the United States. The bulletin carries charts covering the situation in particular localities throughout the United States.

The analysis has this to say about the bituminous situation:

The following statement of the U. S. Geological Survey will be of interest as indicating the days' supplies of bituminous coal in the hands of various classes of consumers in the United States on January 1, 1922:

	Days
By-product coke plants	42
Steel plants	48
Other industrials	51
Artificial gas plants	89
Electric utilities	51
Coal dealers—bituminous	33
Railroads (estimated from incomplete data)	35

Subsequent statements are that supplies have increased to some extent up to February 11.

The consumption of bituminous coal in 1921 averaged 32,000,000 tons per month, or about 7,600,000 net tons per week. Bituminous consumption is not subject to the extreme seasonal weather fluctuations affecting anthracite. Bituminous, however, is directly affected by industrial conditions, reflecting immediately a revival or depression. This variation is shown by a comparison of the active year of 1920, when the total production was 556,316,000 tons, with the depressed year of 1921, when production totaled 407,048,000 tons.

The Geological Survey reports that stored bituminous coal on January 1, 1922, totaled 27,000,000 tons. The Geological Survey further notes that stocks cannot fall much below 20,000,000 tons (as in 1920) without danger of a "coal panic." The quantity of coal, therefore, which can be drawn from stocks on hand before a serious situation develops is about 27,000,000 tons. To this supply there will be continually added the output of non-union fields. The strike of 1919 furnishes some precedent as to what can be expected. At that time non-union districts furnished approximately 4,000,000 tons per week. Assuming this year's consumption to be comparable to that of 1921, 7,600,000 tons per week, the supply from non-union fields would fall short 3,600,000 tons per week of meeting the demand. To cover this deficit we might have the 27,000,000 tons of stored coal, which would last approximately eight weeks. This period might be lengthened by increased production from the non-union fields and there are reasons to believe this production will increase, but how rapidly and to what extent can only be conjectured.

The above are average figures covering the entire producing and consuming areas, and rest on a theory of even division of product and uniform storage capacity and uniform stocks on hand throughout the country. In reality, however, such uniform conditions do not exist in the different communities. Moreover, in case of strike the ordinary lines of distribution are so disarranged that there results great variation in the ability of different communities to secure needed supplies.



HOME OF BEAUTY HOUSE NO. 101

The view above shows Home of Beauty House No. 101, built by Mr. Leslie Welter at Moorehead, Minnesota. Mr. Welter says: "We are very well pleased with our building experience. A leading architect of Fargo, N. D., said that this house is the best designed and best looking house of any he has seen in this section of the country. Our house created such a favorable impression that several houses have been built of brick in this vicinity this season. I wish to thank you for the excellent service you rendered me at a cost that was practically negligible."

Better Homes

AS THE MANY ADVANTAGES of the Face Brick house—its supreme beauty, its unmatched durability, its safety from fire and its marked economies—should be available to the average home-builder, to whom the architect is not accessible, the American Face Brick Association has issued various designs for small Face Brick houses, ranging in size from three to eight rooms.

During the last year and a half nearly 100,000 of these plan booklets have been sent out on request and the designs have received enthusiastic endorsement from home-builders in all parts of the country.

"The Home of Beauty" shows fifty houses, mostly two stories, designed by architects in all parts of the country for a national competition. They represent a wide variety of architectural designs and carefully planned interior arrangements. Sent for 50 cents. We have complete working drawings, specifications and quantity estimates for these houses at nominal cost.

"Face Brick Bungalow and Small House Plans" are issued in four booklets, showing 3 to 4-room houses, 5-room houses, 6-room houses, and 7 to 8-room houses, in all ninety-two, each reversible with a different exterior design. These designs are unusual and distinctive, combined with convenient interiors and economical construction. The entire set for one dollar. Any one of the booklets, 25 cents.

We also have the complete working drawings, specifications and masonry quantity estimates at nominal prices. Select from the booklets the designs you like best and order the plans, even if you are not going to build now, for their study will be not only interesting and instructive, but helpful in formulating your future plans for a home.

"The Story of Brick" is an artistic booklet with numerous illustrations and much valuable information for all who intend to build. It discusses in detail the many advantages and economies of the Face Brick house. Sent free. Address, American Face Brick Association, 1130 Westminster Building, Chicago, Illinois.

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"THERE IS A STEEL SASH FOR EVERY PURPOSE."

Keeping the City's Craw Full

By Caroline B. Sherman
Of the U. S. Department of Agriculture

IN THE very middle of the past winter, people in furs and heavy coats bought strawberries from hawkers on the streets of Washington. People who live in cities are apt to grow callous to wonders that are brought to their doors. Few of them stop to think by what processes their breakfast oranges or their dinner potatoes have arrived at their tables.

To feed one of our large American cities requires concentrated effort in practically every state and in many foreign countries.

Not only do our great cities draw such supplies from afar, but they draw them in huge quantities. As might be expected, the number of carloads of fruits and vegetables shipped in by our three largest cities, New York, Chicago, and Philadelphia, in addition to the amount trucked in by neighboring farmers, is closely in proportion to population. Thus Chicago, with about half the population of New York, unloads about half as many cars, while Philadelphia unloads about a third as many.

In 1921 alone, more than 437,000 cars of eight kinds of fruits and vegetables were shipped out of their producing territory to feed distant populations. Apples, white potatoes, onions, cabbage, strawberries, tomatoes, and cantaloupes were in these cars. Other similar commodities probably filled more than half as many cars more. Of these leading lines, New York takes 50,000 cars annually, Chicago 25,000, and Philadelphia approximately 16,000 cars.

These three cities together consume almost a fourth of the total shipped apple crop of the country. All cities like apples and consume more than of any other kind of fruit.

On a five-year average, Georgia leads all of the states in carload shipments of peaches. Of a total of 10,500 cars shipped out in one year, New York has been known to take more than 3,000 from this state alone, while Chicago is a good customer. California ships to both markets.

Potatoes not only lead all other vegetables in demand, but in New York they comprise two-thirds of the total supply of leading vegetables, and in number of carloads they equal its entire supply of fruits. About 19,000 cars, or 12,000,000 bushels, are required by New York each year to feed its multitudes. Chicago takes nearly 12,000 cars and Philadelphia about 7,000.

Although 22,000 cars of domestic onions are shipped annually, and New York draws heavy supplies from Texas and California as well as from neighboring states, yet many are imported to supply its foreign population. Some years more than 1,000,000 bushels are imported, chiefly from Bermuda and Valencia. Only a few years ago we were dependent upon local growers for all of our highly perishable fruits, such as strawberries, tomatoes, and cantaloupes. Seasons were short and quality often inferior. Now distance, heat and cold make little difference in distribution. When Louisiana growers enter the market in large quantities in April they meet practically no carlot competition until May.

Our large cities now boast a year-round supply of tomatoes. Florida ships in small lots during the winter, and early in the spring Mississippi and Texas come on the markets with large quantities. Careful methods of picking, grading, packing and shipping are

WHO Handles Your Checks?

Thousands of dollars are lost every day through check raising that could be saved by using *insured* checks. It is easy to alter any check. Even amateurs do it. If you have insured checks, though, you are positively protected against loss from such causes.

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NOTE: Special Insured Voucher Checks, Pay-roll Checks and Personal Checks may be purchased direct if your bank does not furnish you Super-Safety Insured checks. Order today, sending sample of style of check you desire, or we will design one for you. If you desire, we will have a salesman call.



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making these out-of-season fruits of increasingly satisfactory quality and flavor, and the amounts lost and wasted through long-distance shipment, while still too great, are constantly decreasing with the use of improved methods.

The cantaloupe season in the cities has been extended from a few weeks to many months, and more than 20,000 carloads enter commercial trade in the course of a year.

Uncle Sam's Transportation Offices

HERE are some of the Federal bureaus and departments whose activities touch our interstate commerce. The list is a long one, but it is not safe to jump at the conclusion that all of the regulation is mere official interference. It simply emphasizes the fact that the interests of the people are bound up in the movement of trade and that public officers must protect these interests. Here is the list:

Bureau of Internal Revenue—Treasury Department.—Makes regulations for levy of federal taxes whether upon private cost service or upon net income.

Prohibition Commissioner, Bureau of Internal Revenue.—Makes regulations under which intoxicating liquors are transported across the great American desert from oasis to oasis.

Customs Bureau, Treasury Department.—Makes regulations for the transportation of imported merchandise in bond; makes regulation respecting export declarations, etc., required from the point of audit of export shipments.

Comptroller General of Accounts, Treasury Department.—Handles questions respecting decreased rates and freight and passenger service rendered the government by land grant railroads or other roads with which there are outstanding contracts for decreased rates.

Bureau of the Budget, Treasury Department.—Passes upon all questions of monies needed for the discharge of the duties of the Interstate Commerce Commission, the Railroad Labor Board, etc.

Bureau of Public Health.—Exercises control over water supply used for drinking and culinary purposes by interstate carriers; enforces international quarantine regulations of the United States, etc.

General Staff, War Department.—Makes plans for military utilization of railroads.

Office of Engineers, War Department.—Deals with questions respecting railroad bridges over navigable waters.

Inland and Coastwise Waterways Service, War Department.—Investigates internal arrangements between rail and water carriers, facilities for interchange of freight, etc.; operates large lines for the Government on several important water routes.

Air Service, War Department.—Operates all air-craft for the Army; operates flying fields, encourages provision of landing fields, etc.

War Department.—In reality the assignment of officers for executive positions, operates the Panama Canal Railroad Co. across the Isthmus, the Panama Steamship Co., with vessels operating between New York and the Isthmus, and the Panama Canal, a waterway for seagoing vessels.

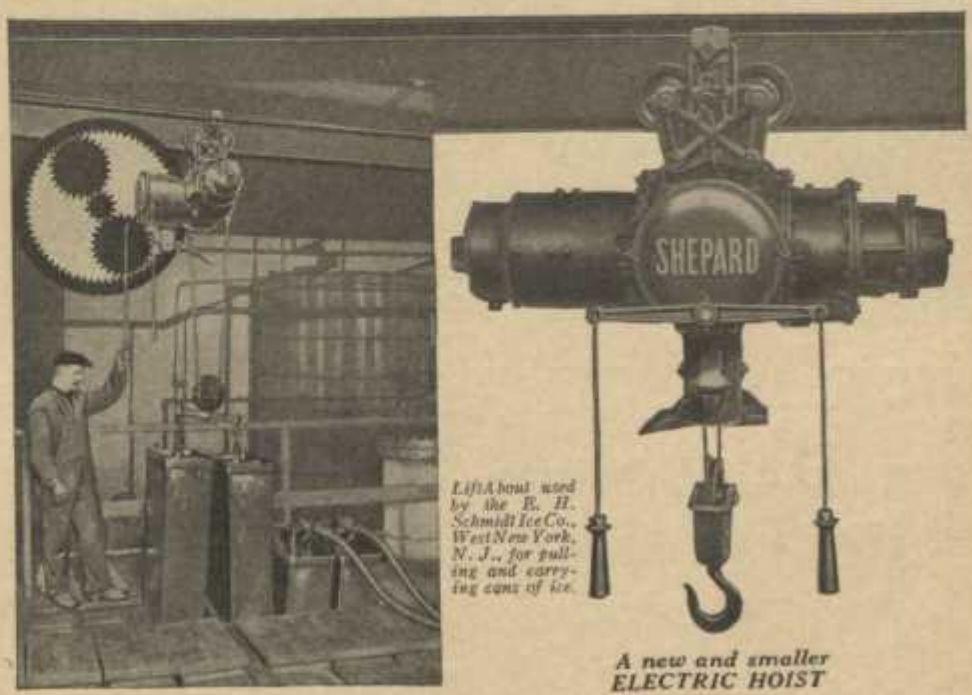
Post-Office Department.—Operates airplanes on coastal routes and also other vehicles by land and by water; supervises all transportation of mails on railroads, electric cars, steamers, etc., and administers questions connected with compensation to the railroads for carrying the mails.

Naval Observatory, Washington.—Fixes the standards of time on which the railroads are run.

General Land Office.—Grants rights-of-way for railroads over public lands.

Commissioner of Indian Affairs, Department

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One man—any man

Whether the loads are heavy, fragile, or cumbersome, one man—any man—with a ***LiftAbout*** can handle them. No valuable floor space is used, for a ***LiftAbout*** is easily and quickly installed to run on overhead I-Beam track—is always out of the way, but instantly available for use.



Made by largest producer of electric hoists in America

The Shepard Electric ***LiftAbout*** follows the same principles of design and construction that have made "Shepards" the most widely known and used electric hoists in America. It is surprisingly low in cost and economical to run, and makes power-lifting available for every load-moving job.

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In range of application a ***LiftAbout*** is almost without limit. It finds use in stores, factories, warehouses, stockrooms, hotels, ice plants, garages, packing houses, in newspaper plants, in apartment houses and office buildings for removing ashes, on farms, in fact, everywhere. Write and learn how the ***LiftAbout*** will pay you.

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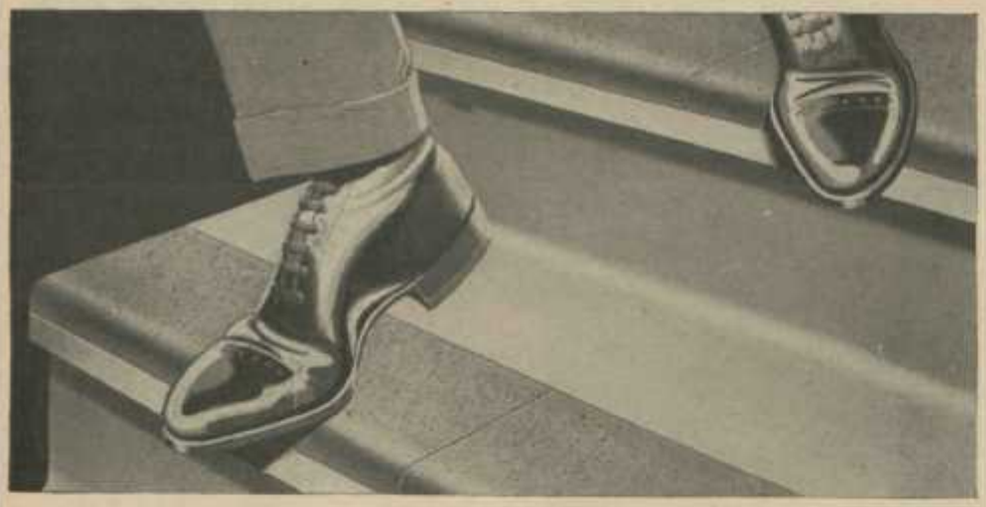


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of the Interior.—Grants rights-of-way for railroads over Indian Reservations.

Alaskan Engineering Commission, Interior Department.—Locates, constructs and operates railroads from the interior of Alaska to the coast.

Weather Bureau, Department of Agriculture.—Provides marine intelligence, etc., for the benefit of commerce and navigation.

Forest Service, Department of Agriculture.—Builds highways in forest reserves.

Bureau of Public Roads, Department of Agriculture.—Administers federal aid road act under which the federal government cooperates with the states in improving highways.

Bureau of Animal Industry, Department of Agriculture.—Enforces quarantine regulations in interstate transportation of live stock.

Federal Horticultural Board, Department of Agriculture.—Formulates and enforces regulations respecting interstate transportation of plants, etc. (Quarantine)

Bureau of Biological Survey.—Administers federal laws respecting interstate commerce in game birds.

Bureau of Light Houses, Department of Commerce.—In charge of lighthouses and aids to navigation.

Hydrographic Office, Navy Department.—Supplies charts, sailing directions, etc., for foreign waters.

Coast Guard, Treasury Department.—Maintains life saving stations along navigable waters.

Coast and Geodetic Survey.—Provides charts, sailing directions, etc., for domestic waters.

Bureau of Navigation, Department of Commerce.—Has general supervision of commerce, marine and merchant seamen of the United States, enforcing regulations as to the regulation of vessels, the employment of seamen, etc.

Steamboat Inspection Service, Department of Commerce.—Inspects and approves boilers and accessories used in American steamers; enforces laws respecting condition of hulls and provision of life-saving equipment.

Bureau of Immigration, Department of Labor.—Enforces immigration laws as they affect water and land carriers.

Interstate Commerce Commission.—Regulates rates and service of interstate carriers, and regulates a large variety of relations, for example, exemption from anti-trust laws.

U. S. Railroad Administration.—Engaged in completing the operations of the Government resulting from federal control of railroads.

U. S. Railroad Labor Board.—Regulates wages and working conditions of employees on all interstate carriers.

United States Shipping Board.—Owns, charters and operates commercial steamers.

Council of National Defense.—Is charged with the preparation of plans for the coordination of transportation facilities for military and commercial purposes, the location of highways, waterways, etc.

War Finance Corporation.—Has power to make loans to the railroads and has exercised this power with the result that considerable sums are now due to the corporation from various railroads.

The Alien Property Custodian.—Holds considerable amounts of railroad securities taken over from enemies of the United States.

The United States Tariff Commission.—Considers and reports on the effect of import and export rail rates on customs duties.

National Advisory Commission for Aeronautics.—Supports and directs the investigation and study of problems of flight.

The United States Board of Mediation and Conciliation.—Is maintained to settle disputes by mediation, conciliation, etc., between railroads and their employees.

International Joint Commission.—Has jurisdiction over cases involving the use or obstruction or diversion of waters forming the international boundary between U. S. and Canada.

The Department of Commerce.—Is charged with the work of promoting the commerce of the United States, including its transportation.

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First National Bank, Detroit, Mich.
Garfield National Bank, New York
New York Stock Exchange, New York
American Nat'l Bank, Nashville, Tenn.
Bank of Manhattan Co., New York
Central Union Trust Co., New York
Chemical National Bank, New York
—Others, too numerous for space.

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Scott, Harding & Co., Shanghai, China
S. H. Kresge & Co., New York
The Hub, Chicago
Sears, Roebuck and Co., Chicago
National Cloak & Suit Co., Kansas City, Mo.
Montgomery Ward & Co., Chicago
Chas. A. Strelinger Co., The, Detroit, Mich.
Lit Bros., Inc., Philadelphia, Pa.
A. W. McCloy, Stationery, Pittsburgh, Pa.
Larkin Company, Buffalo, N. Y.
—Others, too numerous for space.

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Henry Ford Hospital, Detroit, Mich.
Bellevue Hospitals, New York
St. Mary's Hospital, Rochester, Minn.
—Others, too numerous for space.

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Swift Residence, Lake Forest, Ill.
Cornelius Vanderbilt Residence, New York
Lucy Carnegie Est. (Dungeness), Cumberland, Ga.
R. T. Crane, Jr., Estate, Ipswich, Mass.
A. W. Mellon Estate, Pittsburgh, Pa.
Henry Ford Estate, Dearborn, Mich.
—Others, too numerous for space.

RAILROADS

Illinois Central R. R.
Chicago & Northwestern R. R.
New York Central R. R.
Pennsylvania R. R.
Grand Trunk Ry.
Chinese Government Ry.
Louisville & Nashville R. R.
Missouri Pacific R. R.
Michigan Central R. R.
Milwaukee Electric Ry. & Light Co.
Terminal R. R. Assn., St. Louis, Mo.
Texas Steamship Co., Bath, Maine
—Others, too numerous for space.

FACTORIES

Aetna Knitting Mills, Troy, N. Y.
Fairbanks, Morse & Co., Beloit, Wis.
General Motors Corp. Bldg., Detroit, Mich.
General Electric Co., Bridgeport, Conn.
Hoover Suction Sweeper Co., Canton, Ohio
National Screw & Tack Co., Cleveland, Ohio
Long Bell Lumber Co., Quitman, Miss.
Libby, McNeill & Libby, Blue Island, Ill.
Lehigh Portland Cement Co., Oglesby, Ill.
Lufkin Rule Co., Saginaw, Mich.
H. K. Mulford Co., Philadelphia, Pa.
Packard Motor Co., Boston and Chicago
American Sugar Refining Co., Chalmette, La.
—Others, too numerous for space.

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Westinghouse Control Will Make a Motor Do Anything

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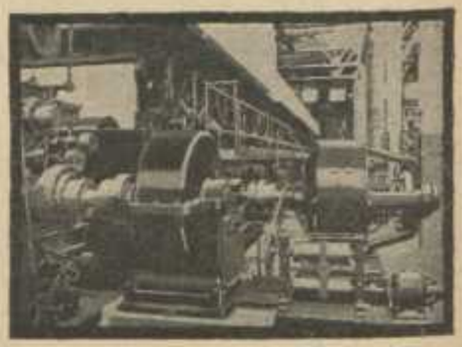
Consider how the almost boundless energy that electricity provides is but a savage torrent of power until it is directed and skillfully utilized by the devices that direct it into the desired uses. Imagine the knowledge of conditions, of mechanical requirements, of operating problems, and of men, that must be brought to bear on the design and development of apparatus for the efficient control of motors and other electrical machines, and you will see why it is that Westinghouse has for years applied the special talents and experience of great engineers to the solution of this important question.

So many remarkable and reliable devices for control purposes are now available, that it does not seem too much to say that Westinghouse Control will make a motor do anything that lies within the range of its capacity. And there are undoubtedly many instances where regular or special control apparatus will add measurably to the usefulness of motor equipment that may already seem to be quite satisfactory.

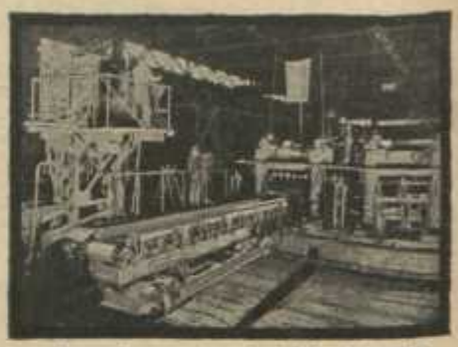
Westinghouse invites inquiries from manufacturers or others to whom any aspect of this question may be interesting. Whether improved control promises to bring better efficiency, more production, lowered labor costs, more reliable operation, greater safety, or whatever, Westinghouse engineers will gladly assist you in gaining the results you should have.

Perhaps there is a control Problem in your plant of which you are not aware.

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Automatic control on Bar Mill. Automatic control has made possible the handling of heavy steel bars easily, cheaply and rapidly.



800 horse power hoist motor handling cars of coal on one of the longest slopes in the Pennsylvania Bituminous Mines.

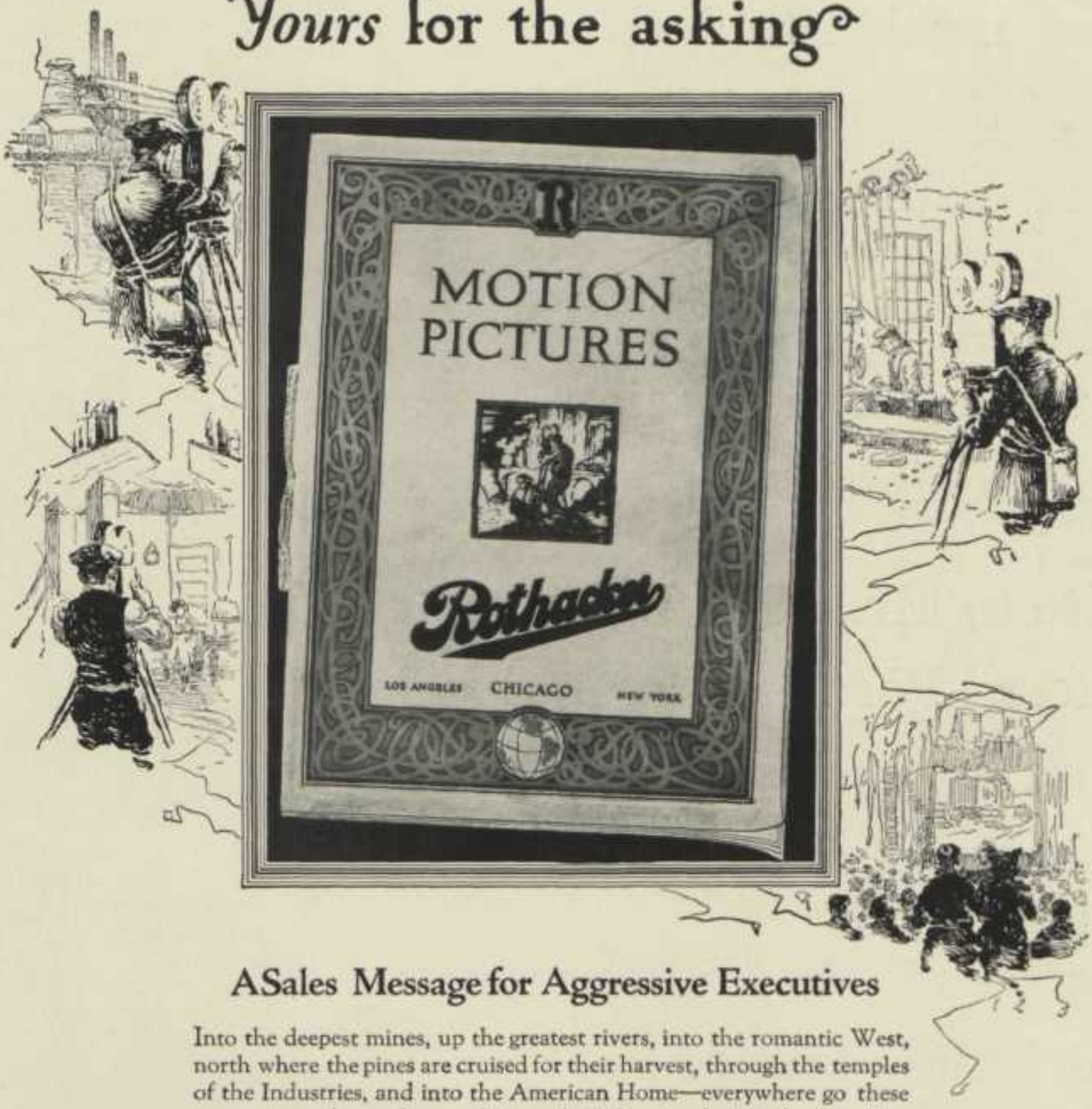


Movable car dumper discharging grain. This operation takes one man ten minutes. It used to take eight to ten men twenty minutes.

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